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(FILE 'HOME' ENTERED AT 09:40:57 ON 15 JUN 2004)

FILE 'MEDLINE, CAPLUS, BIOSIS, EMBASE, SCISEARCH, AGRICOLA'
ENTERED AT

09:41:28 ON 15 JUN 2004

L1 1631 S HUMAN PROTEIN C
L2 11812 S PROTEIN C (P) HUMAN
L3 11815 S L1 OR L2
L4 9890993 S VARIANT OR MUTANT OR FRAGMENT OR MUTAT? OR
SUBSTITUT? OR DELE
L5 3991 S L3 (P) L4
L6 293 S K251 OR LYS 251 OR (RESIDUE 251) OR (POSITION 251)
L7 0 S L5 (P) L6
L8 100458 S PROTEIN C
L9 18051 S L8 (P) L4
L10 1 S L9 (P) L6
L11 10786 S ANTICOAGULANT ACTIVITY
L12 3796 S AMIDOLYTIC ACTIVITY
L13 6976 S ALPH-1-ANTITRYPSIN OR (ALPHA-1 PI) OR (ALPHA-1
PROTEINASE INH
L14 2688 S (HUMAN PLASMA) (P) INACTIVAT?
L15 4254894 S (IN VITRO) OR (IN VIVO)
L16 34385 S L15 (P) (HALF-LIFE)
L17 288 S L5 (P) (L11 OR L12)
L18 80 S L5 (P) (L13 OR L14)
L19 30 S L5 (P) L16
L20 339 S L17 OR L18 OR L19
L21 0 S L20 AND L6
L22 0 S K251G OR K251S OR K251T OR K251C OR K251Y OR K251N OR
K251Q
L23 14938 S ANDERSON K?/AU
L24 2638 S PEDERSEN A?/AU
L25 17 S FRESKGAARD P?/AU
L26 17590 S L23 OR L24 OR L25
L27 4 S L26 AND L5
L28 3 DUPLICATE REMOVE L27 (1 DUPLICATE REMOVED)

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Type	L #	Hits	Search Text	DBs	Time Stamp	Com ment s	Err or Defi nition	Err ors
1 BRS	L17	479	human adj protein adj c	USPAT; US-PGPUB; EPO; JPO; DERWENT	2004/06/15 09:06		0	
2 BRS	L18	517	(protein adj c) near human	USPAT; US-PGPUB; EPO; JPO; DERWENT	2004/06/15 09:10		0	
3 BRS	L19	517	17 or 18	USPAT; US-PGPUB; EPO; JPO; DERWENT	2004/06/15 09:10		0	
4 BRS	L20	333534 1	(variant or mutant or fragment or mutat\$3 or substitut\$3 or delet\$3 or addit\$3)	USPAT; US-PGPUB; EPO; JPO; DERWENT	2004/06/15 09:12		0	
5 BRS	L21	170	19 same 20	USPAT; US-PGPUB; EPO; JPO; DERWENT	2004/06/15 09:12		0	
6 BRS	L24	23	k251 or lys251	USPAT; US-PGPUB; EPO; JPO; DERWENT	2004/06/15 09:14		0	
7 BRS	L25	12	20 same 24	USPAT; US-PGPUB; EPO; JPO; DERWENT	2004/06/15 09:23		0	
8 BRS	L26	0	21 same 24	USPAT; US-PGPUB; EPO; JPO; DERWENT	2004/06/15 09:21		0	
9 BRS	L27	0	19 same 24	USPAT; US-PGPUB; EPO; JPO; DERWENT	2004/06/15 09:24		0	
10 BRS	L28	8897	protein adj c	USPAT; US-PGPUB; EPO; JPO; DERWENT	2004/06/15 09:23		0	

Type	L #	Hits	Search Text	DBs	Time Stamp	Comments	Error Definition	Errors
11 BRS	L29	2	28 same 24	USPAT; US-PGPUB; EPO; JPO; DERWENT	2004/06/15 09:24			0
12 BRS	L30	274	(residue adj "251") or (position adj "251")	USPAT; US-PGPUB; EPO; JPO; DERWENT	2004/06/15 09:25			0
13 BRS	L31	3	28 same 30 same 20	USPAT; US-PGPUB; EPO; JPO; DERWENT	2004/06/15 09:26			0
14 BRS	L32	1903	anticoagulant adj activity	USPAT; US-PGPUB; EPO; JPO; DERWENT	2004/06/15 09:28			0
15 BRS	L33	528	amidolytic adj activity	USPAT; US-PGPUB; EPO; JPO; DERWENT	2004/06/15 09:29			0
16 BRS	L34	1468	(alpha-1-antitrypsin) or (alpha-1 adj PI) or (alpha-1 adj proteinase adj inhibitor)	USPAT; US-PGPUB; EPO; JPO; DERWENT	2004/06/15 09:31			0
17 BRS	L35	3668	32 or 33 or 34	USPAT; US-PGPUB; EPO; JPO; DERWENT	2004/06/15 09:32			0
18 BRS	L36	20	21 same 35	USPAT; US-PGPUB; EPO; JPO; DERWENT	2004/06/15 09:32			0
19 BRS	L37	1	36 same (24 or 30)	USPAT; US-PGPUB; EPO; JPO; DERWENT	2004/06/15 09:33			0
20 BRS	L38	195	(in adj vivo adj half-life) or (in adj vitro adj half-life)	USPAT; US-PGPUB; EPO; JPO; DERWENT	2004/06/15 09:35			0

Type	L #	Hits	Search Text	Dbs	Time Stamp	Comments	Error Definition	Errors
21 BRS	L39	2	resistance near (human adj plasma)	USPAT; US-PGPUB; EPO; JPO; DERWENT	2004/06/15 09:35			0
22 BRS	L40	0	21 same (38 or 39)	USPAT; US-PGPUB; EPO; JPO; DERWENT	2004/06/15 09:36			0
23 BRS	L41	318561	(host adj cell) or vector	USPAT; US-PGPUB; EPO; JPO; DERWENT	2004/06/15 09:37			0
24 BRS	L42	78	21 same 41	USPAT; US-PGPUB; EPO; JPO; DERWENT	2004/06/15 09:37			0
25 BRS	L43	1	21 same 41 same (24 or 30)	USPAT; US-PGPUB; EPO; JPO; DERWENT	2004/06/15 09:37			0
26 BRS	L44	14	anderson adj kim.in.	USPAT; US-PGPUB; EPO; JPO; DERWENT	2004/06/15 09:38			0
27 BRS	L45	53	pedersen adj anders.in.	USPAT; US-PGPUB; EPO; JPO; DERWENT	2004/06/15 09:39			0
28 BRS	L46	6	freskgaard adj per.in.	USPAT; US-PGPUB; EPO; JPO; DERWENT	2004/06/15 09:39			0
29 BRS	L47	71	44 or 45 or 46	USPAT; US-PGPUB; EPO; JPO; DERWENT	2004/06/15 09:39			0
30 BRS	L48	2	47 and 21	USPAT; US-PGPUB; EPO; JPO; DERWENT	2004/06/15 09:39			0


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89 482 20.7 229 12 US-09-825-751A-72 Sequence 72, App1
90 474 20.4 658 10 US-09-776-191-10 Sequence 10, App1
91 474 20.4 658 15 US-10-156-214A-10 Sequence 10, App1
92 474 20.4 802 10 US-09-776-191-8 Sequence 8, App1
93 474 20.4 802 15 US-10-156-214A-8 Sequence 8, App1
94 473.5 20.4 255 16 US-10-600-187-7 Sequence 7, App1
95 473.5 20.4 655 14 US-10-172-712-28 Sequence 28, App1
96 470 20.2 802 9 US-09-888-615-113 Sequence 113, App1
97 470 20.2 802 9 US-09-978-295A-169 Sequence 169, App1
98 470 20.2 802 9 US-09-978-697-169 Sequence 169, App1
99 470 20.2 802 9 US-09-978-192A-169 Sequence 169, App1
100 470 20.2 802 9 US-09-999-832A-169 Sequence 169, App1
101 470 20.2 802 10 US-09-978-189-169 Sequence 169, App1
102 470 20.2 802 10 US-09-978-608A-169 Sequence 169, App1
103 470 20.2 802 10 US-09-978-585A-169 Sequence 169, App1
104 470 20.2 802 10 US-09-978-191A-169 Sequence 169, App1
105 470 20.2 802 10 US-09-978-403A-169 Sequence 169, App1
106 470 20.2 802 10 US-09-978-564A-169 Sequence 169, App1
107 470 20.2 802 10 US-09-999-833A-169 Sequence 169, App1
108 470 20.2 802 10 US-09-981-915A-169 Sequence 169, App1
109 470 20.2 802 10 US-09-978-824-169 Sequence 169, App1
110 470 20.2 802 10 US-09-918-585A-169 Sequence 169, App1
111 470 20.2 802 10 US-09-978-423A-169 Sequence 169, App1
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116 470 20.2 802 10 US-09-978-643A-169 Sequence 169, App1
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121 470 20.2 802 10 US-09-978-194A-169 Sequence 169, App1
122 470 20.2 802 10 US-09-999-829A-169 Sequence 169, App1
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127 470 20.2 802 12 US-10-164-749A-169 Sequence 169, App1
128 470 20.2 802 12 US-09-999-831A-169 Sequence 169, App1
129 470 20.2 802 12 US-10-013-917A-169 Sequence 169, App1
130 470 20.2 802 12 US-09-999-834A-169 Sequence 169, App1
131 470 20.2 802 12 US-10-162-521A-169 Sequence 169, App1
132 470 20.2 802 12 US-10-145-016A-169 Sequence 169, App1
133 470 20.2 802 12 US-10-145-088A-169 Sequence 169, App1
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135 470 20.2 802 12 US-10-145-123A-169 Sequence 169, App1
136 470 20.2 802 12 US-10-165-038A-169 Sequence 169, App1
137 470 20.2 802 12 US-10-165-353A-169 Sequence 169, App1
138 470 20.2 802 12 US-10-167-600-169 Sequence 169, App1
139 470 20.2 802 12 US-10-170-481A-169 Sequence 169, App1
140 470 20.2 802 12 US-10-172-039A-169 Sequence 169, App1
141 470 20.2 802 12 US-10-210-028-169 Sequence 169, App1
142 470 20.2 802 14 US-10-017-081A-169 Sequence 169, App1
143 470 20.2 802 14 US-10-167-749-169 Sequence 169, App1
144 470 20.2 802 14 US-10-013-921A-169 Sequence 169, App1
145 470 20.2 802 14 US-10-013-923A-169 Sequence 169, App1
146 470 20.2 802 14 US-10-016-177A-169 Sequence 169, App1
147 470 20.2 802 14 US-10-166-709A-169 Sequence 169, App1
148 470 20.2 802 14 US-10-143-031A-169 Sequence 169, App1
149 470 20.2 802 14 US-10-143-030A-169 Sequence 169, App1
150 470 20.2 802 14 US-10-002-967A-169 Sequence 169, App1
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ALIGNMENTS

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RESULT 1
; Sequence 4, Application US/09978917A
; Publication No. US20030027299A1
; GENERAL INFORMATION:
; APPLICANT: Maxygen Aps; Maxygen Holdings
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; TITLE OF INVENTION: Protein C or activated protein C-like molecules
; FILE REFERENCE: 0219us310 - protein C
; CURRENT APPLICATION NUMBER: US/09/978, 917A
; CURRENT FILING DATE: 2001-10-17
; NUMBER OP SEQ ID NOS: 48
; SOFTWARE: Patent In Ver. 2.1
; SEQ ID NO 4
; LENGTH: 419
; TYPE: PRT
; ORGANISM: Homo sapiens
US-09-978-917A-4
Query Match 100.0%; Score 2324; DB 10; Length 419;
Best Local Similarity 100.0%; Pred. No. 3.8e-190;
Matches 419; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 ANSFLERLHSSLERECIEICDPEAKEIFONVDDTLAFMSKYVDGQCLVPLEHPCA 60
1 ANSFLERLHSSLERECIEICDPEAKEIFONVDDTLAFMSKYVDGQCLVPLEHPCA 60
Db 1 ANSFLERLHSSLERECIEICDPEAKEIFONVDDTLAFMSKYVDGQCLVPLEHPCA 60

QY 61 SLCCGHTGCTIDGSRSCDSCGMRGRCORFVSPFNSLNDGGCTHYCLEEYGRRCSC 120
61 SLCCGHTGCTIDGSRSCDSCGMRGRCORFVSPFNSLNDGGCTHYCLEEYGRRCSC 120
Db 61 SLCCGHTGCTIDGSRSCDSCGMRGRCORFVSPFNSLNDGGCTHYCLEEYGRRCSC 120

QY 121 APGYKLGDDLQCHPAVKEPCGRPMKREKKRSHLRDTEDEQVDPRLIDKMTTRRD 180
121 APGYKLGDDLQCHPAVKEPCGRPMKREKKRSHLRDTEDEQVDPRLIDKMTTRRD 180
Db 121 APGYKLGDDLQCHPAVKEPCGRPMKREKKRSHLRDTEDEQVDPRLIDKMTTRRD 180

QY 181 SPQVVLDSKKKACAVLHPSVWVLAHCDSEKLLVLEBYLDRWEKWEMLDLDI 240
181 SPQVVLDSKKKACAVLHPSVWVLAHCDSEKLLVLEBYLDRWEKWEMLDLDI 240
Db 181 SPQVVLDSKKKACAVLHPSVWVLAHCDSEKLLVLEBYLDRWEKWEMLDLDI 240

QY 241 KEVFVHPVSKSTNDNDIALHLAQPATLSQTVICLPDSGLAEELNQAQGETLVYGM 300
241 KEVFVHPVSKSTNDNDIALHLAQPATLSQTVICLPDSGLAEELNQAQGETLVYGM 300
Db 241 KEVFVHPVSKSTNDNDIALHLAQPATLSQTVICLPDSGLAEELNQAQGETLVYGM 300

QY 301 GYHSREKAKRNTFYVLFKIPVPHNECEVMSNMVSNMCLCAGILDRDACAEGDS 360
301 GYHSREKAKRNTFYVLFKIPVPHNECEVMSNMVSNMCLCAGILDRDACAEGDS 360
Db 301 GYHSREKAKRNTFYVLFKIPVPHNECEVMSNMVSNMCLCAGILDRDACAEGDS 360

QY 361 GGMVASFHGTWFLVGLVSWGECGLHNVGVYKVSRYLDIHGHTRDRAKQSMAP 419
361 GGMVASFHGTWFLVGLVSWGECGLHNVGVYKVSRYLDIHGHTRDRAKQSMAP 419
Db 361 GGMVASFHGTWFLVGLVSWGECGLHNVGVYKVSRYLDIHGHTRDRAKQSMAP 419

RESULT 2
; Sequence 4, Application US/09997623
; Publication No. US20030018175A1
; GENERAL INFORMATION:
; APPLICANT: Maxygen Aps; Maxygen Holdings
; TITLE OF INVENTION: Protein C or activated protein C-like molecules
; FILE REFERENCE: 0219us410 - protein C
; CURRENT APPLICATION NUMBER: US 09/978, 917
; CURRENT FILING DATE: 2001-11-29
; PRIOR APPLICATION NUMBER: US 09/978, 917
; PRIOR FILING DATE: 2001-10-17
; NUMBER OF SEQ ID NOS: 48
; SOFTWARE: Patent In Ver. 2.1
; SEQ ID NO 4
; LENGTH: 419
; TYPE: PRT
; ORGANISM: Homo sapiens
US-09-997-623-4
Query Match 100.0%; Score 2324; DB 12; Length 419;
Best Local Similarity 100.0%; Pred. No. 3.8e-190;
Matches 419; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
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QY 61 SLCCGHTCTIDIGISFSCDCRS GWEGRFQREVSFLNCSLDNGGCTHYCLEEVGMRCSC 120
DB 61 SLCCGHTCTIDIGISFSCDCRS GWEGRFQREVSFLNCSLDNGGCTHYCLEEVGMRCSC 120
QY 121 APGYKIGDILQCHPAVFPCCGPRMKEKRSKSHLRDTEDEQDQVPELIDGMTRRGD 180
DB 121 APGYKIGDILQCHPAVFPCCGPRMKEKRSKSHLRDTEDEQDQVPELIDGMTRRGD 180
QY 181 SPWQVVLDSKKKLACGAVLHPSPVLTAAHOMDESKLLVRLGEYDLRREWEKELDLDI 240
DB 181 SPWQVVLDSKKKLACGAVLHPSPVLTAAHOMDESKLLVRLGEYDLRREWEKELDLDI 240
QY 241 KEVFEHPNYSKSTTNDIALHLAOPATLSQTIYICLPDSGLAREELNOAGQETLVYGM 300
DB 241 KEVFEHPNYSKSTTNDIALHLAOPATLSQTIYICLPDSGLAREELNOAGQETLVYGM 300
QY 301 GYHSSREKAKRNTFVNFILKIPVPHNECSEVMSNMVSENNMLCAGILGDRDACEGDS 360
DB 301 GYHSSREKAKRNTFVNFILKIPVPHNECSEVMSNMVSENNMLCAGILGDRDACEGDS 360
QY 361 GGPVVASFHGTWFLVGLVSWGCGGLHNYGVYTVSRYLDMTHGIRDKAPQKSWAP 419
DB 361 GGPVVASFHGTWFLVGLVSWGCGGLHNYGVYTVSRYLDMTHGIRDKAPQKSWAP 419

RESULT 3

US-10-182-263-1
; Sequence 1, Application US/10182263
; Publication No. US2003022354A1
; GENERAL INFORMATION:
; APPLICANT: Gerlitz, Bruce E
; APPLICANT: Jones, Bryan E
; APPLICANT: Grinnell, Brian W
; TITLE OF INVENTION: PROTEIN C DERIVATIVES
; FILE REFERENCE: X-13611
; CURRENT APPLICATION NUMBER: US/10/182,263
; CURRENT FILING DATE: 2002-07-22
; PRIOR APPLICATION NUMBER: 60/181,948
; PRIOR FILING DATE: 2002-02-11
; PRIOR APPLICATION NUMBER: 60/189,193
; PRIOR FILING DATE: 2000-03-14
; NUMBER OF SEQ ID NOS: 12
; SOFTWARE: PatentIn version 3.1
; SEQ ID NO 1
; LENGTH: 419
; TYPE: PRT
; ORGANISM: Homo sapiens
US-10-182-263-1

Query Match 100.0%; Score 2324; DB 14; Length 419;
Best Local Similarity 100.0%; Pred. No. 3,8e-190;
Matches 419; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

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DB 1 ANSFLEELRHSSLERECIEICDFEAKEIFQVNDDTLAFMSKAVDQDQVLPLEHPCA 60
QY 61 SLCCGHTCTIDIGISFSCDCRS GWEGRFQREVSFLNCSLDNGGCTHYCLEEVGMRCSC 120
DB 61 SLCCGHTCTIDIGISFSCDCRS GWEGRFQREVSFLNCSLDNGGCTHYCLEEVGMRCSC 120
QY 121 APGYKIGDILQCHPAVFPCCGPRMKEKRSKSHLRDTEDEQDQVPELIDGMTRRGD 180
DB 121 APGYKIGDILQCHPAVFPCCGPRMKEKRSKSHLRDTEDEQDQVPELIDGMTRRGD 180
QY 181 SPWQVVLDSKKKLACGAVLHPSPVLTAAHOMDESKLLVRLGEYDLRREWEKELDLDI 240
DB 181 SPWQVVLDSKKKLACGAVLHPSPVLTAAHOMDESKLLVRLGEYDLRREWEKELDLDI 240
QY 241 KEVFEHPNYSKSTTNDIALHLAOPATLSQTIYICLPDSGLAREELNOAGQETLVYGM 300
DB 241 KEVFEHPNYSKSTTNDIALHLAOPATLSQTIYICLPDSGLAREELNOAGQETLVYGM 300

QY 301 GYHSSREKAKRNTFVNFILKIPVPHNECSEVMSNMVSENNMLCAGILGDRDACEGDS 360
DB 301 GYHSSREKAKRNTFVNFILKIPVPHNECSEVMSNMVSENNMLCAGILGDRDACEGDS 360
QY 361 GGPVVASFHGTWFLVGLVSWGCGGLHNYGVYTVSRYLDMTHGIRDKAPQKSWAP 419
DB 361 GGPVVASFHGTWFLVGLVSWGCGGLHNYGVYTVSRYLDMTHGIRDKAPQKSWAP 419

RESULT 4

US-10-168-407-1
; Sequence 1, Application US/10168407
; Publication No. US20030207435A1
; GENERAL INFORMATION:
; APPLICANT: Gerlitz, Bruce E
; APPLICANT: Jones, Bryan E
; TITLE OF INVENTION: PROTEIN C DERIVATIVES
; FILE REFERENCE: X-13610
; CURRENT APPLICATION NUMBER: US/10/168,407
; CURRENT FILING DATE: 2002-11-04
; NUMBER OF SEQ ID NOS: 12
; SOFTWARE: PatentIn version 3.1
; SEQ ID NO 1
; LENGTH: 419
; TYPE: PRT
; ORGANISM: Homo sapiens
US-10-168-407-1

Query Match 100.0%; Score 2324; DB 15; Length 419;
Best Local Similarity 100.0%; Pred. No. 3,8e-190;
Matches 419; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 ANSFLEELRHSSLERECIEICDFEAKEIFQVNDDTLAFMSKAVDQDQVLPLEHPCA 60
DB 1 ANSFLEELRHSSLERECIEICDFEAKEIFQVNDDTLAFMSKAVDQDQVLPLEHPCA 60
QY 61 SLCCGHTCTIDIGISFSCDCRS GWEGRFQREVSFLNCSLDNGGCTHYCLEEVGMRCSC 120
DB 61 SLCCGHTCTIDIGISFSCDCRS GWEGRFQREVSFLNCSLDNGGCTHYCLEEVGMRCSC 120
QY 121 APGYKIGDILQCHPAVFPCCGPRMKEKRSKSHLRDTEDEQDQVPELIDGMTRRGD 180
DB 121 APGYKIGDILQCHPAVFPCCGPRMKEKRSKSHLRDTEDEQDQVPELIDGMTRRGD 180
QY 181 SPWQVVLDSKKKLACGAVLHPSPVLTAAHOMDESKLLVRLGEYDLRREWEKELDLDI 240
DB 181 SPWQVVLDSKKKLACGAVLHPSPVLTAAHOMDESKLLVRLGEYDLRREWEKELDLDI 240
QY 241 KEVFEHPNYSKSTTNDIALHLAOPATLSQTIYICLPDSGLAREELNOAGQETLVYGM 300
DB 241 KEVFEHPNYSKSTTNDIALHLAOPATLSQTIYICLPDSGLAREELNOAGQETLVYGM 300
QY 301 GYHSSREKAKRNTFVNFILKIPVPHNECSEVMSNMVSENNMLCAGILGDRDACEGDS 360
DB 301 GYHSSREKAKRNTFVNFILKIPVPHNECSEVMSNMVSENNMLCAGILGDRDACEGDS 360
QY 361 GGPVVASFHGTWFLVGLVSWGCGGLHNYGVYTVSRYLDMTHGIRDKAPQKSWAP 419
DB 361 GGPVVASFHGTWFLVGLVSWGCGGLHNYGVYTVSRYLDMTHGIRDKAPQKSWAP 419

RESULT 5

US-09-978-917A-2
; Sequence 2, Application US/09978917A
; Publication No. US20030027299A1
; GENERAL INFORMATION:
; APPLICANT: Maxygen Aps; Maxygen Holdings
; TITLE OF INVENTION: Protein C or activated protein C-like molecules
; FILE REFERENCE: 0219u810 - protein C
; CURRENT APPLICATION NUMBER: US/09/978,917A
; CURRENT FILING DATE: 2001-10-17
; NUMBER OF SEQ ID NOS: 48
; SOFTWARE: PatentIn Ver. 2.1

SEQ ID NO 2
LENGTH: 461
TYPE: PRT
ORGANISM: Homo sapiens
FEATURE:
NAME/KEY: SIGNAL
LOCATION: (1)...(42)
FEATURE:
NAME/KEY: CHAIN
LOCATION: (43)...(461)
US-09-978-917A-2

Query Match 100.0%; Score 2324; DB 10; Length 461;
Best Local Similarity 100.0%; Pred. No. 4.3e-190;
Matches 419; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 ANSFLELRHSLSRECEIEICDPEEAKETFQVNDTLAFMSKHYDGDQCLVPLEHPCA 60
DB 43 ANSFLELRHSLSRECEIEICDPEEAKETFQVNDTLAFMSKHYDGDQCLVPLEHPCA 102
QY 61 SLCCGGTCTDGTGSPSCDRCRSGWEGRFQREVSFLNCSLDNGGCTHYCLEEYGRRCSC 120
DB 103 SLCCGGTCTDGTGSPSCDRCRSGWEGRFQREVSFLNCSLDNGGCTHYCLEEYGRRCSC 162
QY 121 APGYKLGDDLLQCHPAVKPCGRPMKMEKRSLSKRDTEDEQVDPRLIDKMTRRGD 180
DB 163 APGYKLGDDLLQCHPAVKPCGRPMKMEKRSLSKRDTEDEQVDPRLIDKMTRRGD 222
QY 181 SPQVVLDSKKKLACAGVLIHPSVLTAAHCMDSESKLIVLGEYDLRRMEKWEILDLDI 240
DB 223 SPQVVLDSKKKLACAGVLIHPSVLTAAHCMDSESKLIVLGEYDLRRMEKWEILDLDI 282
QY 241 KEVFAHPNYSKSTTDNDIALHLAOPATLSQTIPICLPDSGLARBLNOMGSETLVYGM 300
DB 283 KEVFAHPNYSKSTTDNDIALHLAOPATLSQTIPICLPDSGLARBLNOMGSETLVYGM 342
QY 301 GYHSSEKAKRNTFVLANFTKIPVPHNECS EVMNMVSENNLCAGILGRDACEGDS 360
DB 343 GYHSSEKAKRNTFVLANFTKIPVPHNECS EVMNMVSENNLCAGILGRDACEGDS 402
QY 361 GGPWVASFHGTWFLVGLVSWGEGCGILHNYGYTKVSRYLWDHGHIDKEAPQKSWAP 419
DB 403 GGPWVASFHGTWFLVGLVSWGEGCGILHNYGYTKVSRYLWDHGHIDKEAPQKSWAP 461

RESULT 6

US-09-997-623-2
Sequence 2, Application US/09997623
Publication No. US20030018175A1
GENERAL INFORMATION:
APPLICANT: Maxygen Aps; Maxygen Holdings
TITLE OF INVENTION: Protein C or activated protein C-like molecules
FILE REFERENCE: 0219us410 - protein C
CURRENT FILING DATE: 2001-11-29
PRIOR APPLICATION NUMBER: US/09/997,623
PRIOR FILING DATE: 2001-10-17
NUMBER OF SEQ ID NOS: 48
SOFTWARE: Patentn Ver. 2.1
SEQ ID NO 2
LENGTH: 461
TYPE: PRT
ORGANISM: Homo sapiens
FEATURE:
NAME/KEY: SIGNAL
LOCATION: (1)...(42)
NAME/KEY: CHAIN
LOCATION: (43)...(461)
US-09-997-623-2

Query Match 100.0%; Score 2324; DB 12; Length 461;
Best Local Similarity 100.0%; Pred. No. 4.3e-190;
Matches 419; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 ANSFLELRHSLSRECEIEICDPEEAKETFQVNDTLAFMSKHYDGDQCLVPLEHPCA 60
DB 43 ANSFLELRHSLSRECEIEICDPEEAKETFQVNDTLAFMSKHYDGDQCLVPLEHPCA 102
QY 61 SLCCGGTCTDGTGSPSCDRCRSGWEGRFQREVSFLNCSLDNGGCTHYCLEEYGRRCSC 120
DB 103 SLCCGGTCTDGTGSPSCDRCRSGWEGRFQREVSFLNCSLDNGGCTHYCLEEYGRRCSC 162
QY 121 APGYKLGDDLLQCHPAVKPCGRPMKMEKRSLSKRDTEDEQVDPRLIDKMTRRGD 180
DB 163 APGYKLGDDLLQCHPAVKPCGRPMKMEKRSLSKRDTEDEQVDPRLIDKMTRRGD 222
QY 181 SPQVVLDSKKKLACAGVLIHPSVLTAAHCMDSESKLIVLGEYDLRRMEKWEILDLDI 240
DB 223 SPQVVLDSKKKLACAGVLIHPSVLTAAHCMDSESKLIVLGEYDLRRMEKWEILDLDI 282
QY 241 KEVFAHPNYSKSTTDNDIALHLAOPATLSQTIPICLPDSGLARBLNOMGSETLVYGM 300
DB 283 KEVFAHPNYSKSTTDNDIALHLAOPATLSQTIPICLPDSGLARBLNOMGSETLVYGM 342
QY 301 GYHSSEKAKRNTFVLANFTKIPVPHNECS EVMNMVSENNLCAGILGRDACEGDS 360
DB 343 GYHSSEKAKRNTFVLANFTKIPVPHNECS EVMNMVSENNLCAGILGRDACEGDS 402
QY 361 GGPWVASFHGTWFLVGLVSWGEGCGILHNYGYTKVSRYLWDHGHIDKEAPQKSWAP 419
DB 403 GGPWVASFHGTWFLVGLVSWGEGCGILHNYGYTKVSRYLWDHGHIDKEAPQKSWAP 461

RESULT 7

US-10-182-263-2
Sequence 2, Application US/10182263
Publication No. US20030022354A1
GENERAL INFORMATION:
APPLICANT: Genitex, Bruce B
APPLICANT: Jones, Bryan E
APPLICANT: Grinnell, Brian W
TITLE OF INVENTION: PROTEIN C DERIVATIVES
FILE REFERENCE: X-13611
CURRENT APPLICATION NUMBER: US/10/182,263
CURRENT FILING DATE: 2002-07-22
PRIOR APPLICATION NUMBER: 60/181948
PRIOR FILING DATE: 2002-02-11
PRIOR APPLICATION NUMBER: 60/189199
PRIOR FILING DATE: 2000-03-14
NUMBER OF SEQ ID NOS: 12
SOFTWARE: Patentn version 3.1
SEQ ID NO 2
LENGTH: 461
TYPE: PRT
ORGANISM: Homo sapiens
US-10-182-263-2

Query Match 100.0%; Score 2324; DB 14; Length 461;
Best Local Similarity 100.0%; Pred. No. 4.3e-190;
Matches 419; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 ANSFLELRHSLSRECEIEICDPEEAKETFQVNDTLAFMSKHYDGDQCLVPLEHPCA 60
DB 43 ANSFLELRHSLSRECEIEICDPEEAKETFQVNDTLAFMSKHYDGDQCLVPLEHPCA 102
QY 61 SLCCGGTCTDGTGSPSCDRCRSGWEGRFQREVSFLNCSLDNGGCTHYCLEEYGRRCSC 120
DB 103 SLCCGGTCTDGTGSPSCDRCRSGWEGRFQREVSFLNCSLDNGGCTHYCLEEYGRRCSC 162
QY 121 APGYKLGDDLLQCHPAVKPCGRPMKMEKRSLSKRDTEDEQVDPRLIDKMTRRGD 180
DB 163 APGYKLGDDLLQCHPAVKPCGRPMKMEKRSLSKRDTEDEQVDPRLIDKMTRRGD 222
QY 181 SPQVVLDSKKKLACAGVLIHPSVLTAAHCMDSESKLIVLGEYDLRRMEKWEILDLDI 240
DB 223 SPQVVLDSKKKLACAGVLIHPSVLTAAHCMDSESKLIVLGEYDLRRMEKWEILDLDI 282

1000

Db 61 SLCCGHTCIDIGSFSCDGRSGMEGRFCQREVSFLNCSLDNGGCTHYCLEEVMRRCSG 120
QY 121 AAGYKLDLLQCHPAVFPQGRPMKMEKRSKRLKPTDEQSDQVDPRLIDGKTRRGD 180
Db 121 AAGYKLDLLQCHPAVFPQGRPMKMEKRSKRLKPTDEQSDQVDPRLIDGKTRRGD 180
QY 181 SPWQVVLDSKKLACGAVLIHPSWLTAHOMDSKYLVRGEYDARMEKELDLDI 240
Db 181 SPWQVVLDSKKLACGAVLIHPSWLTAHOMDSKYLVRGEYDARMEKELDLDI 240
QY 241 KEVFAHPNYSKSTTNDIALHIAQPATLSQTIYVPCLPDSGLAERELNQAQETLVYGM 300
Db 241 KEVFAHPNYSKSTTNDIALHIAQPATLSQTIYVPCLPDSGLAERELNQAQETLVYGM 300
QY 301 GHSSREKAKNRRTFVNFYIKIPVPHNCSSEWMSNVSNNLCAGILGDRDACEGDS 360
Db 301 GHSSREKAKNRRTFVNFYIKIPVPHNCSSEWMSNVSNNLCAGILGDRDACEGDS 360
QY 361 GGPVASFHGTWFLVGLVSMGEGCGLLHNYGYTKYSRYLDMHGHIRDXKAPQKSNAP 419
Db 361 GGPVASFHGTWFLVGLVSMGEGCGLLHNYGYTKYSRYLDMHGHIRDXKAPQKSNAP 419

RESULT 11

US-10-670-628-2
; Sequence 2, Application US/10670628
; Publication No. US20040038288A1
; GENERAL INFORMATION:
; APPLICANT: Huang, Lihua
; APPLICANT: Riggan, Ralph M
; TITLE OF INVENTION: HUMAN PROTEIN C POLYPEPTIDE
; FILE REFERENCE: X-12279
; CURRENT APPLICATION NUMBER: US/10/670,628
; CURRENT FILING DATE: 2003-09-25
; NUMBER OF SEQ ID NOS: 2
; SOFTWARE: PatentIn version 3.1
; SEQ ID NO 2
; LENGTH: 415
; TYPE: PRD
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: Description of Artificial Sequence: recombinant human protein c
; OTHER INFORMATION: truncated at C-terminus
US-10-670-628-2

Query Match 98.9%; Score 2298; DB 12; Length 415;
Best Local Similarity 100.0%; Pred. No. 6,2e-188;
Matches 415; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 ANSFLEELRHSLRECEIEICDFEBAKEIFQNVDTLIAFMSKHYDQOCIVPLPHPCA 60
Db 1 ANSFLEELRHSLRECEIEICDFEBAKEIFQNVDTLIAFMSKHYDQOCIVPLPHPCA 60
QY 61 SLCCGHTCIDIGSFSCDGRSGMEGRFCQREVSFLNCSLDNGGCTHYCLEEVMRRCSG 120
Db 61 SLCCGHTCIDIGSFSCDGRSGMEGRFCQREVSFLNCSLDNGGCTHYCLEEVMRRCSG 120
QY 121 AAGYKLDLLQCHPAVFPQGRPMKMEKRSKRLKPTDEQSDQVDPRLIDGKTRRGD 180
Db 121 AAGYKLDLLQCHPAVFPQGRPMKMEKRSKRLKPTDEQSDQVDPRLIDGKTRRGD 180
QY 181 SPWQVVLDSKKLACGAVLIHPSWLTAHOMDSKYLVRGEYDARMEKELDLDI 240
Db 181 SPWQVVLDSKKLACGAVLIHPSWLTAHOMDSKYLVRGEYDARMEKELDLDI 240
QY 241 KEVFAHPNYSKSTTNDIALHIAQPATLSQTIYVPCLPDSGLAERELNQAQETLVYGM 300
Db 241 KEVFAHPNYSKSTTNDIALHIAQPATLSQTIYVPCLPDSGLAERELNQAQETLVYGM 300
QY 301 GHSSREKAKNRRTFVNFYIKIPVPHNCSSEWMSNVSNNLCAGILGDRDACEGDS 360
Db 301 GHSSREKAKNRRTFVNFYIKIPVPHNCSSEWMSNVSNNLCAGILGDRDACEGDS 360

QY 361 GGPVASFHGTWFLVGLVSMGEGCGLLHNYGYTKYSRYLDMHGHIRDXKAPQK 415
Db 361 GGPVASFHGTWFLVGLVSMGEGCGLLHNYGYTKYSRYLDMHGHIRDXKAPQK 415

RESULT 12

US-10-168-407-5
; Sequence 5, Application US/10168407
; Publication No. US20030207435A1
; GENERAL INFORMATION:
; APPLICANT: Gerlitz, Bruce E
; APPLICANT: Jones, Bryan E
; TITLE OF INVENTION: PROTEIN C DERIVATIVES
; FILE REFERENCE: X-13610
; CURRENT APPLICATION NUMBER: US/10/168,407
; CURRENT FILING DATE: 2002-11-04
; NUMBER OF SEQ ID NOS: 12
; SOFTWARE: PatentIn version 3.1
; SEQ ID NO 5
; LENGTH: 419
; TYPE: PRD
; ORGANISM: Homo sapiens
US-10-168-407-5

Query Match 98.9%; Score 2298; DB 15; Length 419;
Best Local Similarity 98.8%; Pred. No. 6,3e-188;
Matches 414; Conservative 2; Mismatches 3; Indels 0; Gaps 0;

QY 1 ANSFLEELRHSLRECEIEICDFEBAKEIFQNVDTLIAFMSKHYDQOCIVPLPHPCA 60
Db 1 ANSFLEELRHSLRECEIEICDFEBAKEIFQNVDTLIAFMSKHYDQOCIVPLPHPCA 60
QY 61 SLCCGHTCIDIGSFSCDGRSGMEGRFCQREVSFLNCSLDNGGCTHYCLEEVMRRCSG 120
Db 61 SLCCGHTCIDIGSFSCDGRSGMEGRFCQREVSFLNCSLDNGGCTHYCLEEVMRRCSG 120
QY 121 AAGYKLDLLQCHPAVFPQGRPMKMEKRSKRLKPTDEQSDQVDPRLIDGKTRRGD 180
Db 121 AAGYKLDLLQCHPAVFPQGRPMKMEKRSKRLKPTDEQSDQVDPRLIDGKTRRGD 180
QY 181 SPWQVVLDSKKLACGAVLIHPSWLTAHOMDSKYLVRGEYDARMEKELDLDI 240
Db 181 SPWQVVLDSKKLACGAVLIHPSWLTAHOMDSKYLVRGEYDARMEKELDLDI 240
QY 241 KEVFAHPNYSKSTTNDIALHIAQPATLSQTIYVPCLPDSGLAERELNQAQETLVYGM 300
Db 241 KEVFAHPNYSKSTTNDIALHIAQPATLSQTIYVPCLPDSGLAERELNQAQETLVYGM 300
QY 301 GHSSREKAKNRRTFVNFYIKIPVPHNCSSEWMSNVSNNLCAGILGDRDACEGDS 360
Db 301 GHSSREKAKNRRTFVNFYIKIPVPHNCSSEWMSNVSNNLCAGILGDRDACEGDS 360
QY 361 GGPVASFHGTWFLVGLVSMGEGCGLLHNYGYTKYSRYLDMHGHIRDXKAPQKSNAP 419
Db 361 GGPVASFHGTWFLVGLVSMGEGCGLLHNYGYTKYSRYLDMHGHIRDXKAPQKSNAP 419

RESULT 13

US-10-182-263-5
; Sequence 5, Application US/10182263
; Publication No. US20030022354A1
; GENERAL INFORMATION:
; APPLICANT: Gerlitz, Bruce E
; APPLICANT: Jones, Bryan E
; APPLICANT: Grinnell, Brian W
; TITLE OF INVENTION: PROTEIN C DERIVATIVES
; FILE REFERENCE: X-13611
; CURRENT APPLICATION NUMBER: US/10/182,263
; CURRENT FILING DATE: 2002-07-22
; PRIOR APPLICATION NUMBER: 60/181948
; PRIOR FILING DATE: 2002-02-11
; PRIOR APPLICATION NUMBER: 60/189199

PRIOR FILING DATE: 2000-03-14
 NUMBER OF SEQ ID NOS: 12
 SOFTWARE: PatentIn version 3.1
 SEQ ID NO 5
 LENGTH: 419
 TYPE: PRT
 ORGANISM: Homo sapiens
 US-10-182-263-5

Query Match 98.8%; Score 2296; DB 14; Length 419;
 Best Local Similarity 98.8%; Pred. No. 9,4e-187;
 Matches 414; Conservative 2; Mismatches 3; Indels 0; Gaps 0;

QY 1 ANSFLELRHSSLEKCEIEICDFEAKETIQNVDDTLAFMSKRVDDQCLVPLEHPCA 60
 DB 1 ANSFLELRHSSLEKCEIEICDFEAKETIFEDVDDTLAFMSKRVDDQCLVPLEHPCA 60
 QY 61 SLCCGHGTCIDIGSFSCDCRSQMGGRFCQREVSFLNCSLDNGGCTHYCLEEYGMRCSC 120
 DB 61 SLCCGHGTCIDIGSFSCDCRSQMGGRFCQREVSFLNCSLDNGGCTHYCLEEYGMRCSC 120
 QY 121 APGYKGGDILQCHPAVFPQGRPMKMEKRSKSLKDTDEQDQVDPRLIDGKMTRRGD 180
 DB 121 APGYKGGDILQCHPAVFPQGRPMKMEKRSKSLKDTDEQDQVDPRLIDGKMTRRGD 180
 QY 181 SPQVVLDSKKKLCAGAVLIHPSWVLTAAHCMDSSKLLVRLGEYDLRRMEKWEILDIT 240
 DB 181 SPQVVLDSKKKLCAGAVLIHPSWVLTAAHCMDSSKLLVRLGEYDLRRMEKWEILDIT 240
 QY 241 KEVFNHNSKSTNDNDIALHLAOPATLSQTTVPICLPDSGLARELNQAGETLVGM 300
 DB 241 KEVFNHNSKSTNDNDIALHLAOPATLSQTTVPICLPDSGLARELNQAGETLVGM 300
 QY 301 GYHSSREKAKRRTFVNFIKIPVPHNECEVSNVSNMMLCAGILGRQDACEGDS 360
 DB 301 GYHSSREKAKRRTFVNFIKIPVPHNECEVSNVSNMMLCAGILGRQDACEGDS 360
 QY 361 GGPWVASFHGTWFLVGLVSWGEGCGLIHNYGYTVKSYRLDMHGHIRKXAPQKSNAP 419
 DB 361 GGPWVASFHGTWFLVGLVSWGEGCGLIHNYGYTVKSYRLDMHGHIRKXAPQKSNAP 419

RESULT 14
 US-10-168-407-6
 Sequence 6, Application US/10168407
 Publication No. US20030207435A1
 GENERAL INFORMATION:
 APPLICANT: Gerlitz, Bruce E
 APPLICANT: Jones, Bryan E
 TITLE OF INVENTION: PROTEIN C DERIVATIVES
 FILE REFERENCE: X-13610
 CURRENT APPLICATION NUMBER: US/10168,407
 CURRENT FILING DATE: 2002-11-04
 NUMBER OF SEQ ID NOS: 12
 SOFTWARE: PatentIn version 3.1
 SEQ ID NO 6
 LENGTH: 419
 TYPE: PRT
 ORGANISM: Homo sapiens
 US-10-168-407-6

Query Match 98.7%; Score 2294; DB 15; Length 419;
 Best Local Similarity 98.6%; Pred. No. 1,4e-187;
 Matches 413; Conservative 3; Mismatches 3; Indels 0; Gaps 0;

QY 1 ANSFLELRHSSLEKCEIEICDFEAKETIQNVDDTLAFMSKRVDDQCLVPLEHPCA 60
 DB 1 ANSFLELRHSSLEKCEIEICDFEAKETIFEDVDDTLAFMSKRVDDQCLVPLEHPCA 60
 QY 61 SLCCGHGTCIDIGSFSCDCRSQMGGRFCQREVSFLNCSLDNGGCTHYCLEEYGMRCSC 120
 DB 61 SLCCGHGTCIDIGSFSCDCRSQMGGRFCQREVSFLNCSLDNGGCTHYCLEEYGMRCSC 120

QY 121 APGYKGGDILQCHPAVFPQGRPMKMEKRSKSLKDTDEQDQVDPRLIDGKMTRRGD 180
 DB 121 APGYKGGDILQCHPAVFPQGRPMKMEKRSKSLKDTDEQDQVDPRLIDGKMTRRGD 180
 QY 181 SPQVVLDSKKKLCAGAVLIHPSWVLTAAHCMDSSKLLVRLGEYDLRRMEKWEILDIT 240
 DB 181 SPQVVLDSKKKLCAGAVLIHPSWVLTAAHCMDSSKLLVRLGEYDLRRMEKWEILDIT 240
 QY 241 KEVFNHNSKSTNDNDIALHLAOPATLSQTTVPICLPDSGLARELNQAGETLVGM 300
 DB 241 KEVFNHNSKSTNDNDIALHLAOPATLSQTTVPICLPDSGLARELNQAGETLVGM 300
 QY 301 GYHSSREKAKRRTFVNFIKIPVPHNECEVSNVSNMMLCAGILGRQDACEGDS 360
 DB 301 GYHSSREKAKRRTFVNFIKIPVPHNECEVSNVSNMMLCAGILGRQDACEGDS 360
 QY 361 GGPWVASFHGTWFLVGLVSWGEGCGLIHNYGYTVKSYRLDMHGHIRKXAPQKSNAP 419
 DB 361 GGPWVASFHGTWFLVGLVSWGEGCGLIHNYGYTVKSYRLDMHGHIRKXAPQKSNAP 419

RESULT 15
 US-10-182-263-3
 Sequence 3, Application US/10182263
 Publication No. US20030022354A1
 GENERAL INFORMATION:
 APPLICANT: Gerlitz, Bruce E
 APPLICANT: Jones, Bryan E
 APPLICANT: Grimeil, Brian W
 TITLE OF INVENTION: PROTEIN C DERIVATIVES
 FILE REFERENCE: X-13611
 CURRENT APPLICATION NUMBER: US/10182,263
 CURRENT FILING DATE: 2002-07-22
 PRIOR APPLICATION NUMBER: 60/181948
 PRIOR FILING DATE: 2002-02-11
 PRIOR APPLICATION NUMBER: 60/189199
 PRIOR FILING DATE: 2000-03-14
 NUMBER OF SEQ ID NOS: 12
 SOFTWARE: PatentIn version 3.1
 SEQ ID NO 3
 LENGTH: 419
 TYPE: PRT
 ORGANISM: Homo sapiens
 US-10-182-263-3

Query Match 98.5%; Score 2290; DB 14; Length 419;
 Best Local Similarity 98.6%; Pred. No. 3,1e-187;
 Matches 413; Conservative 2; Mismatches 4; Indels 0; Gaps 0;

QY 1 ANSFLELRHSSLEKCEIEICDFEAKETIQNVDDTLAFMSKRVDDQCLVPLEHPCA 60
 DB 1 ANSFLELRHSSLEKCEIEICDFEAKETIFEDVDDTLAFMSKRVDDQCLVPLEHPCA 60
 QY 61 SLCCGHGTCIDIGSFSCDCRSQMGGRFCQREVSFLNCSLDNGGCTHYCLEEYGMRCSC 120
 DB 61 SLCCGHGTCIDIGSFSCDCRSQMGGRFCQREVSFLNCSLDNGGCTHYCLEEYGMRCSC 120
 QY 121 APGYKGGDILQCHPAVFPQGRPMKMEKRSKSLKDTDEQDQVDPRLIDGKMTRRGD 180
 DB 121 APGYKGGDILQCHPAVFPQGRPMKMEKRSKSLKDTDEQDQVDPRLIDGKMTRRGD 180
 QY 181 SPQVVLDSKKKLCAGAVLIHPSWVLTAAHCMDSSKLLVRLGEYDLRRMEKWEILDIT 240
 DB 181 SPQVVLDSKKKLCAGAVLIHPSWVLTAAHCMDSSKLLVRLGEYDLRRMEKWEILDIT 240
 QY 241 KEVFNHNSKSTNDNDIALHLAOPATLSQTTVPICLPDSGLARELNQAGETLVGM 300
 DB 241 KEVFNHNSKSTNDNDIALHLAOPATLSQTTVPICLPDSGLARELNQAGETLVGM 300
 QY 301 GYHSSREKAKRRTFVNFIKIPVPHNECEVSNVSNMMLCAGILGRQDACEGDS 360
 DB 301 GYHSSREKAKRRTFVNFIKIPVPHNECEVSNVSNMMLCAGILGRQDACEGDS 360


```

QY      361 GGPVASFHGTWFLVGLVSMGEGCLLHNYGYTKVSRYLDMIGHIRKKEAPQKSNAP 419
      |||
      361 GGPVASFHGTWFLVGLVSMGEGCLLHNYGYTKVSRYLDMIGHIRKKEAPQKSNAP 419

Db
RESULT 16
US-10-182-263-6
; Sequence 6, Application US/10182263
; Publication No. US20030022354A1
; GENERAL INFORMATION:
; APPLICANT: Gerlitz, Bruce E
; APPLICANT: Jones, Bryan E
; APPLICANT: Grinnell, Brian W
; TITLE OF INVENTION: PROTEIN C DERIVATIVES
; FILE REFERENCE: X-13611
; CURRENT APPLICATION NUMBER: US/10/182,263
; CURRENT FILING DATE: 2002-07-22
; PRIOR APPLICATION NUMBER: 60/181948
; PRIOR FILING DATE: 2002-02-11
; PRIOR APPLICATION NUMBER: 60/189199
; PRIOR FILING DATE: 2000-03-14
; NUMBER OF SEQ ID NOS: 12
; SOFTWARE: PatentIn version 3.1
; SEQ ID NO 6
; LENGTH: 419
; TYPE: PRT
; ORGANISM: Homo sapiens
US-10-182-263-6

Query Match      98.5%; Score 2286; DB 14; Length 419;
Best Local Similarity 98.6%; Pred. No. 4,5e-187;
Matches 413; Conservative 2; Mismatches 4; Indels 0; Gaps 0;

QY      1 ANSFLEELRHSLRECEIEICDFEPAKEIFQNVDTLAFWSKHVDGQCLVPLHPQA 60
      |||
      1 ANSFLEELRHSLRECEIEICDFEPAKEIFQNVDTLAFWSKHVDGQCLVPLHPQA 60
Db
QY      61 SLCCGHGTCIDIGISFSCDRSGMEGRFCQREVSFLNCSLDNGGCTHYCLEEVGMRCSC 120
      |||
      61 SLCCGHGTCIDIGISFSCDRSGMEGRFCQREVSFLNCSLDNGGCTHYCLEEVGMRCSC 120
Db
QY      61 SLCCGHGTCIDIGISFSCDRSGMEGRFCQREVSFLNCSLDNGGCTHYCLEEVGMRCSC 120
      |||
      61 SLCCGHGTCIDIGISFSCDRSGMEGRFCQREVSFLNCSLDNGGCTHYCLEEVGMRCSC 120
Db
QY      121 APGYKLGDDLQCHPAVKPCGAPKRMKKRSHLAKRDEDEDDQVDFPRLIKGMTRRGD 180
      |||
      121 APGYKLGDDLQCHPAVKPCGAPKRMKKRSHLAKRDEDEDDQVDFPRLIKGMTRRGD 180
Db
QY      121 APGYKLGDDLQCHPAVKPCGAPKRMKKRSHLAKRDEDEDDQVDFPRLIKGMTRRGD 180
      |||
      121 APGYKLGDDLQCHPAVKPCGAPKRMKKRSHLAKRDEDEDDQVDFPRLIKGMTRRGD 180
Db
QY      181 SPQVVLDSKKKLACGAVLIHPSWYLTAAHCDHESKQLVRLGEGDILRRMEKWEILDLI 240
      |||
      181 SPQVVLDSKKKLACGAVLIHPSWYLTAAHCDHESKQLVRLGEGDILRRMEKWEILDLI 240
Db
QY      181 SPQVVLDSKKKLACGAVLIHPSWYLTAAHCDHESKQLVRLGEGDILRRMEKWEILDLI 240
      |||
      181 SPQVVLDSKKKLACGAVLIHPSWYLTAAHCDHESKQLVRLGEGDILRRMEKWEILDLI 240
Db
QY      241 KEVFVHNYSKSTTDNDIALHLAOPATLSQTIPTICLPDGLARELNQAGETLVTCM 300
      |||
      241 KEVFVHNYSKSTTDNDIALHLAOPATLSQTIPTICLPDGLARELNQAGETLVTCM 300
Db
QY      241 KEVFVHNYSKSTTDNDIALHLAOPATLSQTIPTICLPDGLARELNQAGETLVTCM 300
      |||
      241 KEVFVHNYSKSTTDNDIALHLAOPATLSQTIPTICLPDGLARELNQAGETLVTCM 300
Db
QY      301 GHSSREKAKRNRTFVLNFIKI PVVPHNECSSEWMSNVSNNLCAGLIGRQDACEGDS 360
      |||
      301 GHSSREKAKRNRTFVLNFIKI PVVPHNECSSEWMSNVSNNLCAGLIGRQDACEGDS 360
Db
QY      301 GHSSREKAKRNRTFVLNFIKI PVVPHNECSSEWMSNVSNNLCAGLIGRQDACEGDS 360
      |||
      301 GHSSREKAKRNRTFVLNFIKI PVVPHNECSSEWMSNVSNNLCAGLIGRQDACEGDS 360
Db
QY      361 GGPVASFHGTWFLVGLVSMGEGCLLHNYGYTKVSRYLDMIGHIRKKEAPQKSNAP 419
      |||
      361 GGPVASFHGTWFLVGLVSMGEGCLLHNYGYTKVSRYLDMIGHIRKKEAPQKSNAP 419
Db
RESULT 17
US-10-182-263-4
; Sequence 4, Application US/10182263
; Publication No. US20030022354A1
; GENERAL INFORMATION:
; APPLICANT: Gerlitz, Bruce E
; APPLICANT: Jones, Bryan E
; APPLICANT: Grinnell, Brian W
; TITLE OF INVENTION: PROTEIN C DERIVATIVES
; FILE REFERENCE: X-13611
; CURRENT APPLICATION NUMBER: US/10/182,263

QY      361 GGPVASFHGTWFLVGLVSMGEGCLLHNYGYTKVSRYLDMIGHIRKKEAPQKSNAP 419
      |||
      361 GGPVASFHGTWFLVGLVSMGEGCLLHNYGYTKVSRYLDMIGHIRKKEAPQKSNAP 419
Db
RESULT 18
US-10-406-031-27
; Sequence 27, Application US/10406031
; Publication No. US20040043017A1
; GENERAL INFORMATION:
; APPLICANT: Masci, Paul Pantaleone
; APPLICANT: De Jersey, John
; APPLICANT: Lavin, Martin
; TITLE OF INVENTION: PROTHROMBIN ACTIVATING PROTEIN
; FILE REFERENCE: 15685-002001
; CURRENT APPLICATION NUMBER: US/10/406,031
; CURRENT FILING DATE: 2003-04-02
; PRIOR APPLICATION NUMBER: AU 2003901033
; PRIOR FILING DATE: 2003-03-07
; PRIOR APPLICATION NUMBER: AU PS1483
; PRIOR FILING DATE: 2002-04-03
; NUMBER OF SEQ ID NOS: 51
; SOFTWARE: FastSeq for Windows version 4.0
; SEQ ID NO 27
; LENGTH: 488
; TYPE: PRT
; ORGANISM: Homo sapiens
US-10-406-031-27

Query Match      34.8%; Score 809; DB 12; Length 488;
Best Local Similarity 35.7%; Pred. No. 1.5e-60;
Matches 163; Conservative 87; Mismatches 151; Indels 56; Gaps 9;

```



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1      REGISTRATION NUMBER: 42,271
2      REFERENCE/DOCKET NUMBER: 20695D-000900US
3      TELECOMMUNICATION INFORMATION:
4      TELEPHONE: 415-576-0200
5      TELEFAX: 415-576-0300
6      TELEX: <Unknown>
7      INFORMATION FOR SEQ ID NO: 44:
8      SEQUENCE CHARACTERISTICS:
9      LENGTH: 488 amino acids
10     TYPE: amino acid
11     STRANDEDNESS: single
12     TOPOLOGY: linear
13     MOLECULE TYPE: protein
14     SEQUENCE DESCRIPTION: SEQ ID NO: 44:
15
16     US-10-348-504-44
17
18     Query Match      34.6%; Score 803; DB 14; Length 488;
19     Best Local Similarity 35.4%; Pred. No. 4,7e-60;
20     Matches 162; Conservative 87; Mismatches 152; Indels 56; Gaps 9
21
22     1  ANSFELEHLSRECEICELCDFEAKELIFONVDDTLAFMSRHVNDGQVLPLEHPCA 60
23     41  ANSFELEKKKHLEPRROMETCSYEAREVEFDSDKTNIEFNNKXKDGDCERSP----- 94
24
25     QY  61  SLCCGHTCTIGTGSOCDCRSWEGRFCQREYVSLNSLDNGCTHYALEVGRRCSC 120
26     DB  95  --QONGKCKGGLGEYCTCLEGEGKNCLEFTRKL--CSLDNDPCQGFCHBRONSVCSC 151
27
28     QY  121  APGKLGDDLLQCHPAVKKPCGRPWKMEKKRSHLKRDTEDED-----QVD 167
29     DB  152  ARGETLADNGRACLPGRPEPCGR--QTLERKRKSYAQTSSSGEADSDITWKPYDADLD 209
30
31     QY  168  P-----RLDKQKTRGDSFWQVLLIDSKKILACGAVLIHS 204
32     DB  210  PTENPFDLIDFNPQTPGRGDDNMLITIVGQGECKDGECEWQALLINENNGFCGGTILISEF 269
33
34     QY  205  WYLTAAHCMDSSKCLVRLGEYDLRREKWEKLDLDKEFVHPWYSKSTTNDILALALA 264
35     DB  270  YLTAAHCYQAKCKFRKRGVDKRTVEQEGSAVHEVEVYIENRFTKETIYDDIIVLRK 329
36
37     QY  265  QPANTLSQTLVPCLDPSGLAERELNOAGQET-LVTGWSYHSSREKAKNKRTFVLIPIKI 323
38     DB  330  TPIPTFNVAAPACLPEDMAESTL--MTQKTGIVSGFGRTHKEKROSTR-----LKMLEY 382
39
40     QY  324  PVPFPHNECSFVMSNMVSENNLCAGLIGERDADCEGDSGPNVVAEFGTWPILVGLVSWGEG 383
41     DB  383  PYVDNRSCLSLSSFLTIQNNFPAQGYDTKQEDACGDSGGSPHYTRFKDTITFVIGVMSGS 442
42
43     QY  384  GGLLENYGVYTVKSRVYLDWTHIGHIRDKKAPQ-KSNAP 419
44     DB  443  CARKGKYGITYVTARFLKMLDRSMKTRGLPYAKSHAP 479
45
46     RESULT 20
47     US-10-407-123-27
48     Sequence 27, Application US/10407123
49     Publication No. US20030181381A1
50     GENERAL INFORMATION:
51     APPLICANT: Himmel,spach, Michele
52     SCHLOKAT, Uwe
53     DORNER, Friedrich
54     FISCH, Andreas
55     FIEBL, Johann
56     TITLE OF INVENTION: Factor X Analogues With
57     a Modified Protease Cleavage Site
58     NUMBER OF SEQUENCES: 122
59     CORRESPONDENCE ADDRESS:
60     ADDRESSEE: Townsend and Townsend and Crew LLP
61     STREET: Two Embarcadero Center, Eighth Floor
62     CITY: San Francisco
63     STATE: CA
64     COUNTRY: USA
65     ZIP: 94111-3834

```

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; COMPUTER READABLE FORM:
; MEDIUM TYPE: Diskette
; COMPUTER: IBM Compatible
; OPERATING SYSTEM: DOS
; SOFTWARE: FastSeq for Windows Version 2.0
;
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/10/407,123
; FILING DATE: 04-Apr-2003
; CLASSIFICATION: <Unknown>
;
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US/09/367,791A
; FILING DATE: 12-No. US20030181381A1-1999
; APPLICATION NUMBER: At A 335/97
; FILING DATE: 27-FEB-1997
; APPLICATION NUMBER: WO PCT/AT98/00045
; FILING DATE: 27-FEB-1998
;
; ATTORNEY/AGENT INFORMATION:
; NAME: Ausenhus, Scott L.
; REGISTRATION NUMBER: 42,471
; REFERENCE/DOCKET NUMBER: 20695D-000700US
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: (415) 576-0200
; TELEFAX: (415) 576-0300
;
; INDEX: <Unknown>
;
; INFORMATION FOR SEQ ID NO: 27:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 488 amino acids
; TYPE: amino acid
; STRANDEDNESS: <Unknown>
; TOPOLOGY: linear
; MOLECULE TYPE: protein
; SEQUENCE DESCRIPTION: SEQ ID NO: 27:
US-10-407-123-27

Query Match          34.6%; Score 803; DB 14; Length 488;
Best Local Similarity 35.4%; Pred. No. 4,7e-60;
Matches 162; Conservative 87; Mismatches 152; Indels 56; Gaps 9;

QY 1 ANSFLEELRHSSLEBCEIEICDFEAEKIFONVDDTLAFMSKHYDQGLVPLEHPCA 60
DB 41 ANSFLEEMKGLHRECEMETCSYEFAREVEDSDTNFMKHYDQGLVPLEHPCA 94
QY 61 SLCCGHTCIDIGISFSCDCRSWMEGRFCQREVSFLNCSLDNGGCTHYCLEEYWMRC 120
DB 95 --CQNGCKCKDLGELYCTCLBGFEGKNCFLTRKTLCSLDNGDCDQFCHBQNSVVCSC 151
QY 121 APEYKIGDILQCHPAYKPCGPKMKMEKRSKSLKRDIEDQD-----QYD 167
DB 152 ARGYTLADNGACIPTGPYPCGK--QTLERRKRSVAQATSSSGEAPDSITWKPYADADID 209
QY 168 P-----RLIDQKMYRRGDSFWQVVLIDSKKKLACGAVLHPS 204
DB 210 PTENPPDLDFNQTPREGDNNLTIRVSGQCKCKGCPWALLIHEKRGCGSTLISF 269
QY 205 WVLTAACHCDESKKLVLRLGEYDLRRMEKMLDLDIEVPHNPSTSKSTTNDIALHLA 264
DB 270 YLLTAACHCLYQAKRFKRVVGDRENTQEBGSAVHEVEVLIKRRFTKTYDFDIAVLRLK 329
QY 265 QPALTSGTIVPTCLPDSGLAERELNQAQOET-IYTGWGHSSREKAKRNTPTLNPFIKI 323
DB 330 TPTFRNVAAPACLPDRMAESTL--MTQKGIIVSGGGRHKGKQSTR-----LKMLEV 382
QY 334 PVPVHNECEVSNVSNVSENNLCAIIGDRQACAGSDGSGPMVASFPGTWFLVSGVSGS 383
DB 383 PVDVBNSSCKLSSSFTITQMFCAAGYDTKQEDACGDSGGHVTFRMDTYFTVGIIVSGS 442
QY 384 CGLIHNYGYTVKSYRLDMIGHIRKKAPO-KSMAP 419
DB 443 CARGGKYIYTVTAFLKMDRSKTRGLPKAKSHAP 479

RESULT 21
US-09-782-587B-3
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; Sequence 3, Application US/09782587B
; Publication No. US20030096338A1
; GENERAL INFORMATION:
; APPLICANT: PEDERSEN, ANDERS H.
; APPLICANT: ANDERSON, KIM V.
; APPLICANT: BORNES, CLAUD
; TITLE OF INVENTION: FACTOR VII OR VIIA-LIKE MOLECULES
; FILE REFERENCE: 31-001100US
; CURRENT APPLICATION NUMBER: US/09/782,587B
; PRIOR FILING DATE: 2002-03-26
; PRIOR APPLICATION NUMBER: PA 2000 00218
; PRIOR FILING DATE: 2000-02-11
; PRIOR APPLICATION NUMBER: 60/184,036
; PRIOR FILING DATE: 2000-02-22
; PRIOR APPLICATION NUMBER: 60/241,916
; PRIOR FILING DATE: 2000-10-18
; NUMBER OF SEQ ID NOS: 19
; SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 3
; LENGTH: 406
; TYPE: PRT
; ORGANISM: Homo sapiens
US-09-782-587B-3

Query Match          33.7%; Score 783; DB 10; Length 406;
Best Local Similarity 38.8%; Pred. No. 1,9e-58;
Matches 164; Conservative 76; Mismatches 147; Indels 36; Gaps 10;

QY 1 ANSFLEELRHSSLEBCEIEICDFEAEKIFONVDDTLAFMSKHYDQGLVPLEHPCA 60
DB 1 ANSFLEELRHSSLEBCEIEICDFEAEKIFONVDDTLAFMSKHYDQGLVPLEHPCA 52
QY 61 SLCCGHTCIDIGISFSCDCRSWMEGRFCQREVSFLNCSLDNGGCTHYCLEEYWMRC 118
DB 53 SPQNGSKCKDQGLSYICFCLPAFBGRNCEHNDQGLICNENGGCEQYCSDFHTGYRSC 112
QY 119 SCAPRYKLDLILQCHPAYKPCGPKMKMEKRSKSLKRDIEDQDQYDPLIDGKRTKR 178
DB 113 RCHGYSYLLADVSCSTPTVEYPCGK-IPTLEKRNA-----SKQSGIVGKVCPE 161
QY 179 GDSFWQVVLIDSKKKLACGAVLHPSWVLTAAHCMDESK--KLVLRLGEYDLRRMEKME 235
DB 162 GECFWQVVLIVNGAOL--CGSTLINTIVWSAAGCFDIXKMRRLIYVGHEDLSHGDG 220
QY 236 LDLDIEVPHNPSTSKSTTNDIALHLAQPATLSQTVPTCLPDSGLAERELNQAQOET 295
DB 221 QSRVAVQVLIPTVYVGTNHDIALLRLHQPVVLTIDVAVPLCLPRTSERTTAPV-RFS 279
QY 236 LVTGWGHSSREKAKRNTPTLNPFIKIYVPHNECEVW-----SNVSENNLCAIGL 350
DB 280 LVSGMGQLDRGATA-----LELMVINVRLMTQDCLQSRKVGDSNITMYMCAIGSD 334
QY 351 DRDACEGDSGGPMVASFPGTWFLVSGVSGCGLLHNYGVTVKVSRYLDMIGHIRDK 410
DB 335 GSKSCCKGDSGGPMVAHTRIGWVLTIGVSMGCGCATVGHGVTVTRVSYVIMLQKLRSE 394
QY 411 EAP 413
DB 395 PRP 397

RESULT 22
US-10-383-898-1
; Sequence 1, Application US/10383898
; Publication No. US20040009914A1
; GENERAL INFORMATION:
; APPLICANT: Emory University
; TITLE OF INVENTION: Curcuminoid-protein conjugates
; FILE REFERENCE: E056 1060.1
; CURRENT APPLICATION NUMBER: US/10/383,898
; CURRENT FILING DATE: 2003-03-07
; NUMBER OF SEQ ID NOS: 1
; SOFTWARE: PatentIn version 3.2
```

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; SEQ ID NO 1
; LENGTH: 406
; TYPE: PRT
; ORGANISM: Homo sapiens
; FEATURE:
; NAME/KEY: CHAIN
; LOCATION: (1)..(406)
US-10-383-698-1

Query Match
Best Local Similarity 33.7%; Score 783; DB 15; Length 406;
Matches 164; Conservative 76; Mismatches 147; Indels 36; Gaps 10;

QY 1 ANSFLELHSHSLRECEETECIOFEEAKETIQNDUTLAFWKGADVDGQCLVPLHPCA 60
D 1 ANAFLELHPSLERBECKEQCFEAREITKDKARKLFWISYDQOC-----AS 52
QY 61 SLCCGHTCTIDIGSFSDCRSGMEGRFQO-REVSFLNCSLDNGGCTHYCLEEYGMRR-C 118
D 53 SPQNGGSCKDQLOSVCPLPAFEGNCEITHKDDQLCVNENGCGEQYCSDHGTGRSC 112
QY 119 SCAPYKLGDDLLQCHPAVKEFGGPRKMKRKSHTLKRDTEDEQVDPRLLDGKMTTR 178
D 113 RCHGGYSLADGVSCTPTVEYPCGK-IPLERKNA-----SKPGRLVGGKVCCK 161
QY 179 GDSFMOVYLLDSKKKLAGAVLHPSWVLTAAHOMDESK--KLIVRLGEYDLRRMEKE 235
D 162 GECPWQVLLVNGAQL-CGGTLINTWVSAHCFDKIKMKNRLAVLGEHDSHEDGDE 220
QY 236 LDLDIKVFPVHPNYSKSTTNDIALHLAQPATLSQTTVPTCLPDSGLAEELNQAQGT 295
D 221 QSRVAVQVITPSTYVPGTTHNDIALRLHQPVVLTDVHVPCLPRTSEETLAFV-RFS 279
QY 296 LVNMGYHSSREKEAKRRRTFVNLFKIPVPHNCESEV-----SNWSENMLCAGILG 350
D 280 LVSGWQLLDLRGATL-----LELWLVNVRPLMTQCLQSKRVGDSNITTEYPCAGYSD 334
QY 351 DRDACEGDSGGMVWASPHGTWFLVGLVSWGCGGLLHNYGYTVKYSYLDIMHGRD 410
D 335 GSKDSCKDGSGGPHHTHRTGWTLTGIVSWGCGATVGHGYTVYSQYIEMQLKMRSE 394
QY 411 EAP 413
D 395 PRP 397

RESULT 23
US-10-263-205B-2
; Sequence 2, Application US/10263205B
; Publication No. US20040087498A1
; GENERAL INFORMATION:
; APPLICANT: BERKNER, Kathleen L.
; APPLICANT: PETERSEN, Lars
; APPLICANT: HART, Charles E.
; APPLICANT: HERDER, Ulla
; APPLICANT: BERGENGAARD, Claus
; TITLE OF INVENTION: MODIFIED FACTOR VII
; FILE REFERENCE: 13952N-8-5-1
; CURRENT APPLICATION NUMBER: US/10/263,205B
; CURRENT FILING DATE: 2002-10-01
; PRIOR APPLICATION NUMBER: 08/464,029
; PRIOR FILING DATE: 1995-06-05
; PRIOR APPLICATION NUMBER: 08/327,690
; PRIOR FILING DATE: 1994-10-24
; PRIOR APPLICATION NUMBER: PCT/US94/05779
; PRIOR FILING DATE: 1994-05-23
; PRIOR APPLICATION NUMBER: 08/065,725
; PRIOR FILING DATE: 1993-05-21
; PRIOR APPLICATION NUMBER: PCT/US92/0,636
; PRIOR FILING DATE: 1991-02-28
; PRIOR APPLICATION NUMBER: 07/662,920
; PRIOR FILING DATE: 1991-02-28
; NUMBER OF SEQ ID NOS: 5
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; SOFTWARE: PatentIn version 3.2
; SEQ ID NO 2
; LENGTH: 406
; TYPE: PRT
; ORGANISM: Homo sapiens
US-10-263-205B-2

Query Match
Best Local Similarity 33.7%; Score 783; DB 16; Length 406;
Matches 164; Conservative 76; Mismatches 147; Indels 36; Gaps 10;

QY 1 ANSFLELHSHSLRECEETECIOFEEAKETIQNDUTLAFWKGADVDGQCLVPLHPCA 60
D 1 ANAFLELHPSLERBECKEQCFEAREITKDKARKLFWISYDQOC-----AS 52
QY 61 SLCCGHTCTIDIGSFSDCRSGMEGRFQO-REVSFLNCSLDNGGCTHYCLEEYGMRR-C 118
D 53 SPQNGGSCKDQLOSVCPLPAFEGNCEITHKDDQLCVNENGCGEQYCSDHGTGRSC 112
QY 119 SCAPYKLGDDLLQCHPAVKEFGGPRKMKRKSHTLKRDTEDEQVDPRLLDGKMTTR 178
D 113 RCHGGYSLADGVSCTPTVEYPCGK-IPLERKNA-----SKPGRLVGGKVCCK 161
QY 179 GDSFMOVYLLDSKKKLAGAVLHPSWVLTAAHOMDESK--KLIVRLGEYDLRRMEKE 235
D 162 GECPWQVLLVNGAQL-CGGTLINTWVSAHCFDKIKMKNRLAVLGEHDSHEDGDE 220
QY 236 LDLDIKVFPVHPNYSKSTTNDIALHLAQPATLSQTTVPTCLPDSGLAEELNQAQGT 295
D 221 QSRVAVQVITPSTYVPGTTHNDIALRLHQPVVLTDVHVPCLPRTSEETLAFV-RFS 279
QY 296 LVNMGYHSSREKEAKRRRTFVNLFKIPVPHNCESEV-----SNWSENMLCAGILG 350
D 280 LVSGWQLLDLRGATL-----LELWLVNVRPLMTQCLQSKRVGDSNITTEYPCAGYSD 334
QY 351 DRDACEGDSGGMVWASPHGTWFLVGLVSWGCGGLLHNYGYTVKYSYLDIMHGRD 410
D 335 GSKDSCKDGSGGPHHTHRTGWTLTGIVSWGCGATVGHGYTVYSQYIEMQLKMRSE 394
QY 411 EAP 413
D 395 PRP 397

RESULT 24
US-10-411-037-8
; Sequence 8, Application US/10411037
; Publication No. US20040043446A1
; GENERAL INFORMATION:
; APPLICANT: Neose Technologies, Inc.
; APPLICANT: Defreese, Shawn
; APPLICANT: Zopf, David
; APPLICANT: Bayer, Robert
; APPLICANT: Hakes, David
; APPLICANT: Chen, Xi
; APPLICANT: Bove, Caryn
; TITLE OF INVENTION: ALPHA GALACTOSIDASE A
; TITLE OF INVENTION: GALACTOSIDASE A
; FILE REFERENCE: 040853-01-5082
; CURRENT APPLICATION NUMBER: US/10/411,037
; CURRENT FILING DATE: 2003-04-09
; PRIOR APPLICATION NUMBER: US 60/328,523
; PRIOR FILING DATE: 2001-10-10
; PRIOR APPLICATION NUMBER: US 60/344,692
; PRIOR FILING DATE: 2001-10-19
; PRIOR APPLICATION NUMBER: US 60/387,292
; PRIOR FILING DATE: 2002-06-07
; PRIOR APPLICATION NUMBER: US 60/391,777
; PRIOR FILING DATE: 2002-06-25
; PRIOR APPLICATION NUMBER: US 60/396,594
; PRIOR FILING DATE: 2002-07-17
; PRIOR APPLICATION NUMBER: US 60/404,249
; PRIOR FILING DATE: 2002-08-16
```

PRIOR APPLICATION NUMBER: US 60/407,527
PRIOR FILING DATE: 2002-08-28
NUMBER OF SEQ ID NOS: 75
SOFTWARE: PatentIn version 3.2
SEQ ID NO 8
LENGTH: 444
TYPE: PRT
ORGANISM: Homo sapiens
US-10-411-037-8

Query Match 33.7%; Score 783; DB 12; Length 444;
Best Local Similarity 38.8%; Pred. No. 2,2e-58;
Matches 164; Conservative 76; Mismatches 147; Indels 36; Gaps 10;

QY 1 ANSFLIEIRHSSLEFRCEIETDPEAKEIFQVNDTLAFSKVXDQCVLPLEHCA 60
DB 39 ANAFLEIRPESLERCKEESFEAREIFKAEKTLFWISYSDQD-----AS 90
QY 61 SLCCGHTCIDIGISFSCDRSGMEGRFCQ-REVSFLNCSLDNGGCTHYCLEEVMRR-C 118
DB 91 SPCQNGSSCQDQLOSYICFLPAFGRNCETHDDQLCVNENGGCGYCSHTGTKASC 150
QY 119 SCAPGYKIGDILQCHPAVPCPGRPWKREKRSLSKEDTEDEQDVDPRLIDGMTR 178
DB 151 RCHEGYSILADGVSCTPVEYPCGK-IPLEKNA-----SKQGRIVGKVCPEK 199
QY 179 GSPNQVYLLDSKKKLAGAVLIHPSWLTFAHOMDESK---KILVRLGYDRLRREKME 235
DB 200 GECPMQVLLVNGAQL-CGGTLINTVWVAACFKIKMKNLAVLGHDLSHDDE 258
QY 236 LDIDKEVFPHPNYSKSTNDIALHLAQPATLSQTIPICLPDSGLARELNQAGET 295
DB 259 QSRRAQVILISTYVPTGTHNDIALRLHQPVVLTDPVPLCLPRTSPERTLAFAV-RFS 317
QY 296 LVTGNGYSSSEKAKRNTFYLNFIKIPVFNHESVEM-----SNVSENLGCGITG 350
DB 318 LVSGMQLIDRGATA-----LEIMVNLVPRMTQDCLQSRKVGDSPIITEYFCAGYSD 372
QY 351 DRDACEGDSGSPWVASFHGTNVLGVSWGCGGLLHNYGYTVSRYLDMWIGHIRDK 410
DB 373 GSKDCKGDSGSPHATYRGTWLTGIVSWGCGAVGFRYTVVSGYLEWLOKLMSE 432
QY 411 EAP 413
DB 433 PRP 435

RESULT 25
US-10-382-248-34
Sequence 34, Application US/10382248
Publication No. US20040056347A1
GENERAL INFORMATION:

APPLICANT: Alabrock, et al.
TITLE OF INVENTION: NOVEL PROTEINS AND NUCLEIC ACIDS ENCODING SAME
FILE REFERENCE: 21402-568C
CURRENT FILING DATE: 2003-03-05
PRIOR FILING DATE: 2002-03-05
PRIOR APPLICATION NUMBER: 60/366,928
PRIOR FILING DATE: 2002-03-22
PRIOR APPLICATION NUMBER: 60/361,974
PRIOR FILING DATE: 2002-03-06
PRIOR APPLICATION NUMBER: 60/365,477
PRIOR FILING DATE: 2002-03-19
PRIOR APPLICATION NUMBER: 60/401,661
PRIOR FILING DATE: 2002-08-06
NUMBER OF SEQ ID NOS: 82
SOFTWARE: Curasequlst version 0.1
SEQ ID NO 34
LENGTH: 444
TYPE: PRT
ORGANISM: Homo sapiens
US-10-382-248-34

Query Match 33.7%; Score 783; DB 12; Length 444;
Best Local Similarity 38.8%; Pred. No. 2,2e-58;
Matches 164; Conservative 76; Mismatches 147; Indels 36; Gaps 10;

QY 1 ANSFLIEIRHSSLEFRCEIETDPEAKEIFQVNDTLAFSKVXDQCVLPLEHCA 60
DB 39 ANAFLEIRPESLERCKEESFEAREIFKAEKTLFWISYSDQD-----AS 90
QY 61 SLCCGHTCIDIGISFSCDRSGMEGRFCQ-REVSFLNCSLDNGGCTHYCLEEVMRR-C 118
DB 91 SPCQNGSSCQDQLOSYICFLPAFGRNCETHDDQLCVNENGGCGYCSHTGTKASC 150
QY 119 SCAPGYKIGDILQCHPAVPCPGRPWKREKRSLSKEDTEDEQDVDPRLIDGMTR 178
DB 151 RCHEGYSILADGVSCTPVEYPCGK-IPLEKNA-----SKQGRIVGKVCPEK 199
QY 179 GSPNQVYLLDSKKKLAGAVLIHPSWLTFAHOMDESK---KILVRLGYDRLRREKME 235
DB 200 GECPMQVLLVNGAQL-CGGTLINTVWVAACFKIKMKNLAVLGHDLSHDDE 258
QY 236 LDIDKEVFPHPNYSKSTNDIALHLAQPATLSQTIPICLPDSGLARELNQAGET 295
DB 259 QSRRAQVILISTYVPTGTHNDIALRLHQPVVLTDPVPLCLPRTSPERTLAFAV-RFS 317
QY 296 LVTGNGYSSSEKAKRNTFYLNFIKIPVFNHESVEM-----SNVSENLGCGITG 350
DB 318 LVSGMQLIDRGATA-----LEIMVNLVPRMTQDCLQSRKVGDSPIITEYFCAGYSD 372
QY 351 DRDACEGDSGSPWVASFHGTNVLGVSWGCGGLLHNYGYTVSRYLDMWIGHIRDK 410
DB 373 GSKDCKGDSGSPHATYRGTWLTGIVSWGCGAVGFRYTVVSGYLEWLOKLMSE 432
QY 411 EAP 413
DB 433 PRP 435

RESULT 26
US-10-411-026-8
Sequence 8, Application US/10411026
Publication No. US20040063911A1
GENERAL INFORMATION:

APPLICANT: Neose Technology, Inc.
APPLICANT: Zopf, David
APPLICANT: Bayer, Robert
APPLICANT: Hakes, David
APPLICANT: Chen, Xi
TITLE OF INVENTION: PROTEIN REMODELING METHODS AND PEPTIDES PRODUCED BY THE
FILE REFERENCE: 040953-01-5053
CURRENT FILING DATE: US/10/411,026
PRIOR FILING DATE: 2003-04-09
PRIOR APPLICATION NUMBER: US 60/328,523
PRIOR FILING DATE: 2001-10-10
PRIOR APPLICATION NUMBER: US 60/344,692
PRIOR FILING DATE: 2001-10-19
PRIOR APPLICATION NUMBER: US 60/387,292
PRIOR FILING DATE: 2002-06-07
PRIOR APPLICATION NUMBER: US 60/391,777
PRIOR FILING DATE: 2002-06-25
PRIOR APPLICATION NUMBER: US 60/396,594
PRIOR FILING DATE: 2002-07-17
PRIOR APPLICATION NUMBER: US 60/404,249
PRIOR FILING DATE: 2002-08-16
PRIOR APPLICATION NUMBER: US 60/407,527
PRIOR FILING DATE: 2002-08-28
NUMBER OF SEQ ID NOS: 75
SOFTWARE: PatentIn version 3.2
SEQ ID NO 8
LENGTH: 444
TYPE: PRT
ORGANISM: Homo sapiens

NUMBER OF SEQ ID NOS: 75
 SOFTWARE: PatentIn version 3.2
 SEQ ID NO 8
 LENGTH: 444
 TYPE: PRT
 ORGANISM: Homo sapiens
 US-10-411-049-8

Query Match 33.7%; Score 783; DB 16; Length 444;
 Best Local Similarity 38.8%; Pred. No. 2.2e-58;
 Matches 164; Conservative 76; Mismatches 147; Indels 36; Gaps 10;

QY 1 ANSFLEIRHSLSRECEIEICDFEAKETFOVNDTLAFMSKHVDGQCLVPLEHPCA 60
 DB 39 ANAFLEIRPSLEIRECKEQCSFEAREIFKDAERTKLFVISTDQC-----AS 90
 QY 61 SLCCGHTCIDIGISFSCDCSNGWEGFPQ-REVSFLNCSLDNGGCTHYCLEVGMRR-C 118
 DB 91 SPQNGGSCXQQLQSYICFLPAFEGNCEHNDOLICVENNGCEQYCSDHGTGRSC 150
 QY 119 SCAPGYKIGDILLQCHPAKPCGHPMKMEKRSKLRDTEDEQDYDPRLLDGKMR 178
 DB 151 RHEGYSLIADGVSCTPTVEYPCGK-IPLEKRNA-----SKPGRIYGVGVCPR 199
 QY 179 GDSFWQVYLLDSKKKLACGAVLIHPSWVLTAAHOMDESK---KLVLRLGEYDLRMEKME 235
 DB 200 GECPMQVLLVNGAQL-CGGLINTTWVSAACFPDKIKWENLIIVLGHDLSEHDGB 258
 QY 236 LDIDKEVFNHNSKSTTDNDIALHLAOPATLSQITVPICLPDSGLARELNQAGET 295
 DB 259 QSRRAQVLIISTYVPGTTHMDIALRLHQPVVLTDHVPLCLPERPFSERTLAFV-RFS 317
 QY 296 LVTGNGYSSREKAKRNRTFVNFKIPVVRNHCSEVM-----SNVSNMLCAGILG 350
 DB 318 LVSGMQLIDGATA-----LEMLVNIWPRMLTQDCLQSRKVGDSNITVIFCGISD 372
 QY 351 DRDACEGDSGGPMVASFHGTWFLVGLVSWGEGGGLLHNYGYTKVSRVYDLMIGHIRDK 410
 DB 373 GSKDSCKGSGGPHATHRGTWVLTGIYSWGCGATVGHGVYTVSYIEMQLKMRSE 432
 QY 411 EAP 413
 DB 433 PRP 435

RESULT 29

US-10-263-205B-3
 Sequence 3, Application US/10263205B
 Publication No. US20040087498A1
 GENERAL INFORMATION:
 APPLICANT: BERKNER, Kathleen L.
 APPLICANT: PETERSEN, Lars
 APPLICANT: HART, Charles E.
 APPLICANT: HEDNER, Ulla
 APPLICANT: BERGSGAARD, Claus
 TITLE OF INVENTION: MODIFIED FACTOR VII
 FILE REFERENCE: 13952N-8-5-1
 CURRENT APPLICATION NUMBER: US/10/263,205B
 CURRENT FILING DATE: 2002-10-01
 PRIOR APPLICATION NUMBER: 08/464,029
 PRIOR FILING DATE: 1995-06-05
 PRIOR APPLICATION NUMBER: 08/327,690
 PRIOR FILING DATE: 1994-10-24
 PRIOR APPLICATION NUMBER: PCT/US94/05779
 PRIOR FILING DATE: 1994-05-23
 PRIOR APPLICATION NUMBER: 08/065,725
 PRIOR FILING DATE: 1993-05-21
 PRIOR APPLICATION NUMBER: PCT/US92/01636
 PRIOR FILING DATE: 1991-02-28
 PRIOR APPLICATION NUMBER: 07/662,920
 PRIOR FILING DATE: 1991-02-28
 NUMBER OF SEQ ID NOS: 5
 SOFTWARE: PatentIn version 3.2

SEQ ID NO 3
 LENGTH: 444
 TYPE: PRT
 ORGANISM: Homo sapiens
 US-10-263-205B-3

Query Match 33.7%; Score 783; DB 16; Length 444;
 Best Local Similarity 38.8%; Pred. No. 2.2e-58;
 Matches 164; Conservative 76; Mismatches 147; Indels 36; Gaps 10;

QY 1 ANSFLEIRHSLSRECEIEICDFEAKETFOVNDTLAFMSKHVDGQCLVPLEHPCA 60
 DB 39 ANAFLEIRPSLEIRECKEQCSFEAREIFKDAERTKLFVISTDQC-----AS 90
 QY 61 SLCCGHTCIDIGISFSCDCSNGWEGFPQ-REVSFLNCSLDNGGCTHYCLEVGMRR-C 118
 DB 91 SPQNGGSCXQQLQSYICFLPAFEGNCEHNDOLICVENNGCEQYCSDHGTGRSC 150
 QY 119 SCAPGYKIGDILLQCHPAKPCGHPMKMEKRSKLRDTEDEQDYDPRLLDGKMR 178
 DB 151 RHEGYSLIADGVSCTPTVEYPCGK-IPLEKRNA-----SKPGRIYGVGVCPR 199
 QY 179 GDSFWQVYLLDSKKKLACGAVLIHPSWVLTAAHOMDESK---KLVLRLGEYDLRMEKME 235
 DB 200 GECPMQVLLVNGAQL-CGGLINTTWVSAACFPDKIKWENLIIVLGHDLSEHDGB 258
 QY 236 LDIDKEVFNHNSKSTTDNDIALHLAOPATLSQITVPICLPDSGLARELNQAGET 295
 DB 259 QSRRAQVLIISTYVPGTTHMDIALRLHQPVVLTDHVPLCLPERPFSERTLAFV-RFS 317
 QY 296 LVTGNGYSSREKAKRNRTFVNFKIPVVRNHCSEVM-----SNVSNMLCAGILG 350
 DB 318 LVSGMQLIDGATA-----LEMLVNIWPRMLTQDCLQSRKVGDSNITVIFCGISD 372
 QY 351 DRDACEGDSGGPMVASFHGTWFLVGLVSWGEGGGLLHNYGYTKVSRVYDLMIGHIRDK 410
 DB 373 GSKDSCKGSGGPHATHRGTWVLTGIYSWGCGATVGHGVYTVSYIEMQLKMRSE 432
 QY 411 EAP 413
 DB 433 PRP 435

RESULT 30

US-10-017-122-2
 Sequence 2, Application US/10017122
 Publication No. US20030087244A1
 GENERAL INFORMATION:
 APPLICANT: McCarthy, Jeanette
 TITLE OF INVENTION: DIAGNOSIS AND TREATMENT OF VASCULAR DISEASE
 FILE REFERENCE: WMT-007
 CURRENT APPLICATION NUMBER: US/10/017,122
 CURRENT FILING DATE: 2001-12-14
 PRIOR APPLICATION NUMBER: 60/327,487
 PRIOR FILING DATE: 2001-10-09
 NUMBER OF SEQ ID NOS: 4
 SOFTWARE: PatentIn ver. 2.0
 SEQ ID NO 2
 LENGTH: 466
 TYPE: PRT
 ORGANISM: Homo sapiens
 US-10-017-122-2

Query Match 33.7%; Score 783; DB 14; Length 466;
 Best Local Similarity 38.8%; Pred. No. 2.3e-58;
 Matches 164; Conservative 76; Mismatches 147; Indels 36; Gaps 10;

QY 1 ANSFLEIRHSLSRECEIEICDFEAKETFOVNDTLAFMSKHVDGQCLVPLEHPCA 60
 DB 61 ANAFLEIRPSLEIRECKEQCSFEAREIFKDAERTKLFVISTDQC-----AS 112
 QY 61 SLCCGHTCIDIGISFSCDCSNGWEGFPQ-REVSFLNCSLDNGGCTHYCLEVGMRR-C 118

```

Db      113  SPQONGSGCKDQLOSYICFLPAFEGRNCETHKDDLLCVNENGGCEYCSHDTGTRSC 172
Qy      119  SCAPYKLGDDLLQCHPAVKEPCGRPKRMEKXSHLKADTEQDQEDVDYDPRLLIDGKMTSR 178
Db      173  RCHEGYSLADGVSCTPTVEYPCGK-IPILEKRNA-----SKQGIYSGKVCCK 221
Qy      179  GDSPMQVYLLDSKKKLACGAVLHPSPWVLTAAHOMDESK---KLVLGEYDLRMEKME 235
Db      222  GECPMQVYLLVNGAQL-CGGTLINTWVSAAHCFDKIKMNRLLIAYLGEHDLSEHGDSE 280
Qy      236  LDDIXEVFHPNYSKSTTNDIALHLAOPATLSQTIYVICLPDSGLAEELNQAQGET 295
Db      281  QSRVAVQVILPSTYVPGTNNHDLALRLHQPVVLTDHVPLCLPRTFSEKTLAFV-RFS 339
Qy      236  LVMGWSHREKEXKRNRTFVLFNFIKIPVPHNECEVM-----SNMVSNNMLCAGILG 350
Db      340  LVSGMGLDRGATL-----LELMTLVNVRIMTODCLQOSRKXGDSBNITTYMFCAGYSD 394
Qy      351  DRDACEGDSGGMVASFPGTWFLVGLVSWERGCGLLANNVGYTVKVSRYLDMIHGIRDK 410
Db      395  GSKDSCKDSGGPHATHTYRGTWVLTGIVSWGCGCATVGHFVTVRSQYIEMLQKLMRSE 454
Qy      411  EAP 413
Db      455  PRP 457

```

RESULT 31

```

US-10-375-741-14
/ Sequence 14, Application US/10375741
/ Publication No. US20030232753A1
/ GENERAL INFORMATION:
/ APPLICANT: Thorpe, Philip E
/ APPLICANT: King, Steven W
/ APPLICANT: Gao, Boqing
/ TITLE OF INVENTION: TISSUE FACTOR METHODS AND COMPOSITIONS FOR COAGULATION AND TUMOR
/ FILE REFERENCE: 4001.001999
/ CURRENT APPLICATION NUMBER: US/10/375,741
/ PRIOR FILING DATE: 2003-02-27
/ PRIOR APPLICATION NUMBER: 09/573,835
/ PRIOR FILING DATE: 2000-05-18
/ PRIOR APPLICATION NUMBER: 6,156,321
/ PRIOR FILING DATE: 1998-01-20
/ PRIOR APPLICATION NUMBER: 60/042,427
/ PRIOR FILING DATE: 1997-03-27
/ PRIOR APPLICATION NUMBER: 60/036,205
/ PRIOR FILING DATE: 1997-01-27
/ PRIOR APPLICATION NUMBER: 60/035,920
/ PRIOR FILING DATE: 1997-01-22
/ NUMBER OF SEQ ID NOS: 27
/ SOFTWARE: PatentIn version 3.1
/ SEQ ID NO 14
/ LENGTH: 466
/ TYPE: PRT
/ ORGANISM: Homo sapiens
US-10-375-741-14

```

```

Query Match      33.7%; Score 783; DB 15; Length 466;
Best Local Similarity 38.8%; Pred. No. 2.3e-58;
Matches 164; Conservative 76; Mismatches 147; Indels 36; Gaps 10;

```

```

Qy      1  ANSFLEELRHSLSRECIETCDPEAKEIFQVNDOTLAFMSKVDQCLVPLEHPCA 60
Db      61  ANAFLLELRPSLSRECKEKEQSFERRKELFKAERTKLFMYISDDQC-----AS 112
Qy      61  SLCCGHTCIDGSGSCDCRSWGEPQO-REVSFLNCSLDNGGCTHYCLEBVGMR-C 118
Db      113  SPQONGSGCKDQLOSYICFLPAFEGRNCETHKDDLLCVNENGGCEYCSHDTGTRSC 172
Qy      119  SCAPYKLGDDLLQCHPAVKEPCGRPKRMEKXSHLKADTEQDQEDVDYDPRLLIDGKMTSR 178
Db      173  RCHEGYSLADGVSCTPTVEYPCGK-IPILEKRNA-----SKQGIYSGKVCCK 221

```

```

Qy      179  GDSPMQVYLLDSKKKLACGAVLHPSPWVLTAAHOMDESK---KLVLGEYDLRMEKME 235
Db      222  GECPMQVYLLVNGAQL-CGGTLINTWVSAAHCFDKIKMNRLLIAYLGEHDLSEHGDSE 280
Qy      236  LDDIXEVFHPNYSKSTTNDIALHLAOPATLSQTIYVICLPDSGLAEELNQAQGET 295
Db      281  QSRVAVQVILPSTYVPGTNNHDLALRLHQPVVLTDHVPLCLPRTFSEKTLAFV-RFS 339
Qy      236  LVMGWSHREKEXKRNRTFVLFNFIKIPVPHNECEVM-----SNMVSNNMLCAGILG 350
Db      340  LVSGMGLDRGATL-----LELMTLVNVRIMTODCLQOSRKXGDSBNITTYMFCAGYSD 394
Qy      351  DRDACEGDSGGMVASFPGTWFLVGLVSWERGCGLLANNVGYTVKVSRYLDMIHGIRDK 410
Db      395  GSKDSCKDSGGPHATHTYRGTWVLTGIVSWGCGCATVGHFVTVRSQYIEMLQKLMRSE 454
Qy      411  EAP 413
Db      455  PRP 457

```

RESULT 32

```

US-10-406-031-8
/ Sequence 8, Application US/10406031
/ Publication No. US20040043017A1
/ GENERAL INFORMATION:
/ APPLICANT: Masci, Paul Pantaleone
/ APPLICANT: De Jersey, John
/ APPLICANT: Lavin, Martin
/ TITLE OF INVENTION: PROTHROMBIN ACTIVATING PROTEIN
/ FILE REFERENCE: 15685-002001
/ CURRENT APPLICATION NUMBER: US/10/406,031
/ PRIOR FILING DATE: 2003-04-02
/ PRIOR APPLICATION NUMBER: AU 2003901033
/ PRIOR FILING DATE: 2003-03-07
/ PRIOR APPLICATION NUMBER: AU PS1483
/ PRIOR FILING DATE: 2002-04-03
/ NUMBER OF SEQ ID NOS: 51
/ SOFTWARE: FaastSeq for Windows Version 4.0
/ SEQ ID NO 8
/ LENGTH: 467
/ TYPE: PRT
/ ORGANISM: Oxyurans microlepidotus
US-10-406-031-8

```

```

Query Match      33.7%; Score 783; DB 12; Length 467;
Best Local Similarity 37.7%; Pred. No. 2.3e-58;
Matches 163; Conservative 77; Mismatches 154; Indels 38; Gaps 9;

```

```

Qy      1  ANSFLEELRHSLSRECIETCDPEAKEIFQVNDOTLAFMSKVDQCLVPLEHPCA 60
Db      41  ANSLFEELRHSLSRECIETCDPEAKEIFQVNDOTLAFMSKVDQCLVPLEHPCA 94
Qy      61  SLCCGHTCIDGSGSCDCRSWGEPQO-REVSFLNCSLDNGGCTHYCLEBVGMR-CSC 120
Db      95  --CHRGTCCKDQLOSYICFLPAFEGRNCETHKDDLLCVNENGGCEYCSHDTGTRSC 151
Qy      121  APGYKLGDDLLQCHPAVKEPCGRPKRMEKXSHLKADTEQDQEDV-----DPRIL 171
Db      152  AEGYLLGDBGSHSCVAGNFGCGRNITKTNKRKASLDPFVQSNATLLKSDNPSPIRIV 211
Qy      172  DGMATRGDSFMQVYLLDSKKKLACGAVLHPSPWVLTAAHOMDESKLVLGEYDLRMEK 231
Db      212  NGWDCLEGCPCMVAVLVDKEKGVFGGTLISPIYVLTAAHCINQTEKTSVVGSDIXSV 271
Qy      232  EKXELDLQIKVFPVHPN-----YSK-----STNDNDIALHLAOPATLSQTIYVICI 278
Db      272  ETGHL-LSYDQKLYVHKAFVPPKGYKFEKEDLVSDYDILAIQKMTIIGSERVADACI 330
Qy      279  PDSGLAEELNQAQGETLVTVGWSHREKEXKRNRTFVLFNFIKIPVPHNECEVM-SNM 338
Db      331  FTADPANYVLMQO-DFGIISGFG--RIFEKPKSN--TLKVLKVPYVDRHTCVSSESP 384

```

RESULT 34
US-10-406-031-11

?
? CURRENT APPLICATION NUMBER: 02/24/2007-02-24
? CURRENT FILING DATE: 2003-02-07
? PRIOR APPLICATION NUMBER: EP 02077060.8
? PRIOR FILING DATE: 2002-05-24
? NUMBER OF SEQ ID NOS: 309


```

; SOFTWARE: PatentIn version 3.1
; SEQ ID NO 225
; LENGTH: 405
; TYPE: PRT
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: sequence of eptacog alpha (factor VII)
US-10-360-101-225

```

```

Query Match          33.5%; Score 779; DB 15; Length 405;
Best Local Similarity 38.6%; Pred. No. 4,2e-58;
Matches 163; Conservative 76; Mismatches 147; Indels 36; Gaps 10;

```

```

QY 2 NSFLIELRHSLSRECTEIEICDFEAEKIFQNVDTLAFMSKHVGDQCLVPLEHRCAS 61
DQ 1 NAFLEIRPGSLERCKEBCQSEAEKIFKDAERTLQFWISDQDC-----ASS 52
QY 62 LCCGHTCIDIGSPSCDGRSGEGRFCQ-REVSFLNCSLNDGCTHYCLEEVMGR-CS 119
DQ 53 PCQNGSCDQLOQSYTCFLCPAFEGANGETHDDQLICVNEGGEQYCSDHGTGRSGR 112
QY 120 CAGYKIGDILLQCHPAVKPCGRPWKMEKRSKSHLKRTDEQDVDPRLIDGKMRG 179
DQ 113 CHEGYSLADGVSCPTVEYPCGR-IPLEKNA-----SKPQGRIVGKQCPKG 161
QY 180 DSPQVVLDSKKKLACGAVLIHPSWTLTAHOMDESK--KLVYLGEDYLRMEKWEI 236
DQ 162 ECPWQYLLVNGAQL-CGGTILNTIVVSAACCPKIKMRNLINLVSHDLSHDDRD 220
QY 237 DLDKEVFVHPNYSSTNDIALHLAQPATLSQTVPICLPDSGLARELNQAGETL 296
DQ 221 SRVAVQYIIPSTVYGTTHDIALRLHQPVVLTQHVVPCLDERTFSERTAFV-RFSL 279
QY 257 VTGWHGSSREKEAKRNTFYVNFIKIPVHNESSEVM-----SNMSEMLCAGILGD 351
DQ 280 VSGWQGLDMGATF-----LELWYLVNPRMTQDCLQSKRVEDSNTIETVFCAGYSDG 334
QY 352 RODACEDSGSPVVASFHGTWFLVGLVSGEGCGLLHNYGYTKVSRVLDWIGHIRDK 411
DQ 335 SKDCXKDGSGPHAHYHGTWYLVGLVSGGCGATVGHFGVYTRVSGYIEMVQCLMSEB 394
QY 412 AP 413
DQ 395 RP 396

```

```

RESULT 36
US-10-406-031-2
; Sequence 2, Application US/10406031
; Publication No. US20040043017A1
; GENERAL INFORMATION:
; APPLICANT: Mascl, Paul, Pantaleone
; APPLICANT: De Jersey, John
; APPLICANT: Lavin, Martin
; TITLE OF INVENTION: PROTHROMBIN ACTIVATING PROTEIN
; FILE REFERENCE: 15685-002001
; CURRENT APPLICATION NUMBER: US/10/406,031
; PRIOR FILING DATE: 2003-04-02
; PRIOR APPLICATION NUMBER: AU 2003901033
; PRIOR FILING DATE: 2003-03-07
; PRIOR APPLICATION NUMBER: AU PS1483
; PRIOR FILING DATE: 2002-04-03
; NUMBER OF SEQ ID NOS: 51
; SOFTWARE: FaetsHQ for Windows Version 4.0
; SEQ ID NO 2
; LENGTH: 467
; TYPE: PRT
; ORGANISM: Pseudonaja textilis
US-10-406-031-2

```

```

Query Match          33.4%; Score 777; DB 12; Length 467;
Best Local Similarity 37.5%; Pred. No. 7.5e-58;
Matches 162; Conservative 77; Mismatches 155; Indels 38; Gaps 9;

```

```

QY 1 ANSFLIELRHSLSRECTEIEICDFEAEKIFQNVDTLAFMSKHVGDQCLVPLEHRC 60
DQ 41 ANSLVEEFKSNTERECIEEBCSEAEKAREVEFEDKETITMNYVDGDCSSNP----- 94
QY 61 SLCCGHTCIDIGSPSCDGRSGEGRFCQREVSFLNCSLNDGCTHYCLEEVMGRCS 120
DQ 95 --CHYRGICDQIGSYTCFLCPAFEGANGETHDDQLICVNEGGEQYCSDHGTGRSGR 151
QY 121 AFGYKIGDILLQCHPAVKPCGRPWKMEKRSKSHLKRTDEQDVDPRLIDGKMRG 171
DQ 152 AFGYKIGDILLQCHPAVKPCGRPWKMEKRSKSHLKRTDEQDVDPRLIDGKMRG 211
QY 172 DGRKTRGDSPPQVVLDSKKKLACGAVLIHPSWTLTAHOMDESKKLVYLGEDYLRME 231
DQ 212 NMDCKIGCECPWQYLLVNGAQL-CGGTILNTIVVSAACCPKIKMRNLINLVSHDLSH 271
QY 232 EKWEILDLDKEVFVHPNYSSTNDIALHLAQPATLSQTVPICLPDSGLARELNQAG 278
DQ 272 EFGPL-LSVNVKVVHKKFVPEKKSQEFYEKEFDLVSYDIALIOMKTPIOFSENVVPA 330
QY 279 PDSGLARELNQAGETLVNTGMYHSREKEAKRNTFYVNFIKIPVHNESSEVM 338
DQ 331 PPAQFANQVLMKQ-DFGVSGFGGIFERGENSK-----TLKVLVFPVDRHTOMLSNP 384
QY 339 VSENNLCAGILGDRQACDGSQSPVVASFHGTWFLVGLVSGEGCGLLHNYGYTKVSR 398
DQ 385 ITPMFCAGYDILLQCHPAVKPCGRPWKMEKRSKSHLKRTDEQDVDPRLIDGKMRG 444
QY 399 YLDWIGHIRDK 410
DQ 445 FLPWIKRIMRQK 456

```

```

RESULT 37
US-10-406-031-17
; Sequence 17, Application US/10406031
; Publication No. US20040043017A1
; GENERAL INFORMATION:
; APPLICANT: Mascl, Paul, Pantaleone
; APPLICANT: De Jersey, John
; APPLICANT: Lavin, Martin
; TITLE OF INVENTION: PROTHROMBIN ACTIVATING PROTEIN
; FILE REFERENCE: 15685-002001
; CURRENT APPLICATION NUMBER: US/10/406,031
; PRIOR FILING DATE: 2003-04-02
; PRIOR APPLICATION NUMBER: AU 2003901033
; PRIOR FILING DATE: 2003-03-07
; PRIOR APPLICATION NUMBER: AU PS1483
; PRIOR FILING DATE: 2002-04-03
; NUMBER OF SEQ ID NOS: 51
; SOFTWARE: FaetsHQ for Windows Version 4.0
; SEQ ID NO 17
; LENGTH: 455
; TYPE: PRT
; ORGANISM: Tropidochis carinatus
US-10-406-031-17

```

```

Query Match          33.4%; Score 775.5; DB 12; Length 455;
Best Local Similarity 37.0%; Pred. No. 9.7e-58;
Matches 157; Conservative 79; Mismatches 151; Indels 37; Gaps 8;
QY 1 ANSFLIELRHSLSRECTEIEICDFEAEKIFQNVDTLAFMSKHVGDQCLVPLEHRC 60
DQ 41 ANSLVEEFKSNTERECIEEBCSEAEKAREVEFEDKETITMNYVDGDCSSNP----- 94
QY 61 SLCCGHTCIDIGSPSCDGRSGEGRFCQREVSFLNCSLNDGCTHYCLEEVMGRCS 120
DQ 95 --CHYRGICDQIGSYTCFLCPAFEGANGETHDDQLICVNEGGEQYCSDHGTGRSGR 151
QY 121 AFGYKIGDILLQCHPAVKPCGRPWKMEKRSKSHLKRTDEQDVDPRLIDGKMRG 171
DQ 152 AFGYKIGDILLQCHPAVKPCGRPWKMEKRSKSHLKRTDEQDVDPRLIDGKMRG 211

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APPLICATION NUMBER: US 07/808,329
 FILING DATE: 1991-12-16
 APPLICATION NUMBER: US 08/249,777
 FILING DATE: 1994-05-26
 APPLICATION NUMBER: US 08/268,003
 FILING DATE: 1994-06-29
 APPLICATION NUMBER: US 08/469,301
 FILING DATE: 1995-06-06
 APPLICATION NUMBER: US 09/016,403
 FILING DATE: 1998-01-30
 APPLICATION NUMBER: US 09/362,207
 FILING DATE: 1999-07-28
 ATTORNEY/AGENT INFORMATION:
 NAME: Michael S. Tuscen, Ph.D.
 REGISTRATION NUMBER: 43,210
 REFERENCE/DOCKET NUMBER: 44481-5002-15-US
 TELECOMMUNICATION INFORMATION:
 TELEPHONE: (202) 739-3000
 TELEFAX: (202) 739-3001
 NAME/KEY: Modified-site
 LOCATION: 6, 7, 14, 16, 19, 20, 25, 26, 29, 32, 39
 OTHER INFORMATION: /note= "Xaa = gamma-carboxy glutamic acid."
 SEQUENCE DESCRIPTION: SEQ ID NO: 3:
 US-10-712-332-3

Query Match 31.9%; Score 741.5; DB 12; Length 437;
 Best Local Similarity 35.2%; Pred. No. 7.5e-55;
 Matches 148; Conservative 84; Mismatches 154; Indels 35; Gaps 8;

QY 1 ANSFLEELHSLRECEIEICDPEAKEIRONVDTLAFNSKHYDGOCLVPLHBPQA 60
 41 ANSFLEELHSLRECEIEICDPEAKEIRONVDTLAFNSKHYDGOCLVPLHBPQA 94
 QY 61 SLCCGHGTCIDGIGSFSCDCRSQWEGREFCQREVSFLNCSLNDGGCTHYCLEEYGMWRSCG 120
 95 --CQNGKCKGGLGEVYCTCLEEGFEKNCLEFTRKL-CSLNDGDCQFCEEQNSVVCSC 151
 QY 121 APGYKGDLLQCHPAKFPCCGPKMKWEKRSKLRKDEDEQDQVDRLLDKMTRRD 180
 152 ARGYTLADNGKACIPTGYPCK--QTLERRK-----RLVGGQECKDE 194
 QY 181 SPMQVVLDSKKLACGAVLHPSWVLTAAQMDSEKLLVLGEYDLRMEWELDDI 240
 195 CPWALLIENEGCGGTLSEFYTLTRAHCLYQARRFYVYDNRNTEQEGEKAHV 254
 QY 241 KEYVHPNYSKSTTMDIALHLAOPATLSQTVIPLPDGSLARELNQOGET-LVTG 299
 255 EYVYKRNFTKETYPFNIAVLRLKPTIFRMVAPACLPERMAESTL--WTKRTIVSG 312
 QY 300 WGHSSREKAKRNTYVNFIRKIPVPHNCSFVMSNMVSENMCAGLGDRDACEG 359
 313 FGRTHKGRQSTR---LKMILEPVYDNRNCKLSSFTITQMFCAGYDTRKQDACAQ 367
 QY 360 SGPWVASFHGTWFLVGIWVSGEGLHNHYGVYTKVSRYLDMHSHRDEKAPQ-KSNA 418
 368 AGGHVYTRFDYITVGVSGWGSQARKKKGITVYKVTATLKNIDRSKXTRGLPKASHA 427
 QY 419 P 419
 DB 428 P 428

RESULT 42
 US-10-038-854-94
 Sequence 94, Application US/10038854
 Publication No. US20040022781A1
 GENERAL INFORMATION:
 APPLICANT: Spylek, Kimberly A
 APPLICANT: Li, Li
 APPLICANT: Wolenc, Adam R
 APPLICANT: Verneil, Corine

APPLICANT: Eisen, Andrew J
 APPLICANT: Liu, Xiaohong
 APPLICANT: Malyskar, Uriel M
 APPLICANT: Shinkets, Richard A
 APPLICANT: Tchernyev, Velizar
 APPLICANT: Spaderna, Steven K
 APPLICANT: Gorman, Linda
 APPLICANT: Kekuda, Ramesh
 APPLICANT: Patturajan, Meera
 APPLICANT: Gusev, Vladimir Y
 APPLICANT: Gangoli, Esna A
 APPLICANT: Guo, Xiaojia S
 APPLICANT: Shenoy, Suresh G
 APPLICANT: Rastelli, Luca
 APPLICANT: Casman, Stacie J
 APPLICANT: Boldog, Ferenc
 APPLICANT: Burgess, Catherine E
 APPLICANT: Edinger, Shlomit R
 APPLICANT: Ellerman, Karen
 APPLICANT: Gunther, Erik
 APPLICANT: Smithson, Glenda
 APPLICANT: Mallet, Isabelle
 APPLICANT: MacDougall, John R
 TITLE OF INVENTION: Proteins and Nucleic Acids Encoding Same
 FILE REFERENCE: 21402-230
 CURRENT APPLICATION NUMBER: US/10/038,854
 PRIOR FILING DATE: 2003-01-22
 PRIOR APPLICATION NUMBER: 60/258,928
 PRIOR FILING DATE: 2000-12-29
 PRIOR APPLICATION NUMBER: 60/259,415
 PRIOR FILING DATE: 2001-01-02
 PRIOR APPLICATION NUMBER: 60/259,785
 PRIOR FILING DATE: 2001-01-04
 PRIOR APPLICATION NUMBER: 60/269,814
 PRIOR FILING DATE: 2001-02-20
 PRIOR APPLICATION NUMBER: 60/279,832
 PRIOR FILING DATE: 2001-03-29
 PRIOR APPLICATION NUMBER: 60/279,833
 PRIOR FILING DATE: 2001-03-29
 PRIOR APPLICATION NUMBER: 60/279,863
 PRIOR FILING DATE: 2001-03-29
 PRIOR APPLICATION NUMBER: 60/283,889
 PRIOR FILING DATE: 2001-04-13
 PRIOR APPLICATION NUMBER: 60/284,447
 PRIOR FILING DATE: 2001-04-18
 PRIOR APPLICATION NUMBER: 60/286,683
 PRIOR FILING DATE: 2001-04-25
 Remaining Prior Application data removed - See File Wrapper or PALM.
 NUMBER OF SEQ ID NOS: 411
 SOFTWARE: PatentIn Ver. 2.1
 SEQ ID NO 94
 LENGTH: 461
 TYPE: PRT
 ORGANISM: Pan troglodytes
 US-10-038-854-94

Query Match 31.8%; Score 740; DB 16; Length 461;
 Best Local Similarity 35.6%; Pred. No. 1.1e-54;
 Matches 151; Mismatches 156; Indels 46; Gaps 10;
 US-10-038-854-94

QY 5 LEEFLHSLRECEIEICDPEAKEIRONVDTLAFNSKHYDGOCLVPLHBPQASLCC 64
 52 LEEFLHSLRECEIEICDPEAKEIRONVDTLAFNSKHYDGOCLVPLHBPQASLCC 103
 QY 65 GHGTCIDGIGSFSCDCRSQWEGREFCQREVSFLNCSLNDGGCTHYCLEEYGMWR-RSCAPG 123
 104 NGSGCKDINSYECWCPFEFGKNCLEDTVT---CNFKGRCEQPCRSADNRVVCSTEG 160
 QY 124 YKLGDLQCHPAKFPCCGPKMKWEKRSKLRKDEDEQDQVDRLLDKMTRRD 167
 161 YKLGDLQCHPAKFPCCGPKMKWEKRSKLRKDEDEQDQVDRLLDKMTRRD 220
 QY 168 ----PRLDGKMTRRGDSPMQVVLDSKKLACGAVLHPSWVLTAAQMDSEKLLVRL 223

```

Db 221 ENDPTVVGGEAKRGQFPQVY-LNGKVDACCGGSIYVNEKIVTAHACVDITGKTTVA 279
QY 224 GEYDLARMEKWEELDDIKEYFVHPNYSKST--DNDIALHQAQATLSQITVPICLPDS 281
Db 280 GHNIEETETETEQKRVNRIIPHNVNAINKNDIALLEDEPLVNSYVTPICIDAK 339
QY 282 GLAEELNOAGETIYVGMG--YHSREKAKRRRTVYANFIKIVFHNHCEVMSNV 339
Db 340 EYTNIFLKFG--SGYVSGWGRVPHKGRS-----ALVQLYRVLVDRAICLRSTKFTI 390
QY 340 SENMLACGILGDRODACEGDSGGPMVASFHGTWFLVGLVSMGEGGLAHNGVYTKVSR 399
Db 391 YNNMFCAGFBEGSCDSCGDSGSPHYTEVGTSPILGIIISWGBCKMKGKGIYTKVSR 450
QY 400 LDMT 403
Db 451 VNMV 454

RESULT 43
US-10-038-854-96
; Sequence 96, Application US/10038854
; Publication No. US20040022781A1
; GENERAL INFORMATION:
; APPLICANT: Spytek, Kimberly A
; APPLICANT: Li, Li
; APPLICANT: Wolenc, Adam R
; APPLICANT: Vermet, Corine
; APPLICANT: Eisen, Andrew J
; APPLICANT: Liu, Xiaohong
; APPLICANT: Malyankar, Uriel M
; APPLICANT: Shinkels, Richard A
; APPLICANT: Tchernev, Velizar
; APPLICANT: Spaderna, Steven K
; APPLICANT: Gorman, Linda
; APPLICANT: Kekuda, Ramesh
; APPLICANT: Patturajan, Meera
; APPLICANT: Gusev, Vladimir Y
; APPLICANT: Gangoli, Esha A
; APPLICANT: Guo, Xiaojia S
; APPLICANT: Shenoy, Suresh G
; APPLICANT: Rastelli, Luca
; APPLICANT: Casman, Stacie J
; APPLICANT: Boldog, Ferenc
; APPLICANT: Burgess, Catherine E
; APPLICANT: Edinger, Shlomit R
; APPLICANT: Ellerman, Karen
; APPLICANT: Gunther, Erik
; APPLICANT: Smithson, Glenda
; APPLICANT: Miller, Isabelle
; APPLICANT: MacDougall, John R
; TITLE OP INVENTION: Proteins and Nucleic Acids Encoding Same
; FILE REFERENCE: 21402-230
; CURRENT APPLICATION NUMBER: US/10/038, 854
; PRIOR FILING DATE: 2003-01-22
; PRIOR APPLICATION NUMBER: 60/258, 928
; PRIOR FILING DATE: 2000-12-29
; PRIOR APPLICATION NUMBER: 60/259, 415
; PRIOR FILING DATE: 2001-01-02
; PRIOR APPLICATION NUMBER: 60/259, 785
; PRIOR FILING DATE: 2001-01-04
; PRIOR APPLICATION NUMBER: 60/269, 814
; PRIOR FILING DATE: 2001-02-20
; PRIOR APPLICATION NUMBER: 60/279, 832
; PRIOR FILING DATE: 2001-03-29
; PRIOR APPLICATION NUMBER: 60/279, 833
; PRIOR FILING DATE: 2001-03-29
; PRIOR APPLICATION NUMBER: 60/279, 863
; PRIOR FILING DATE: 2001-03-29
; PRIOR APPLICATION NUMBER: 60/283, 889
; PRIOR FILING DATE: 2001-04-13
; PRIOR APPLICATION NUMBER: 60/284, 447

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; PRIOR FILING DATE: 2001-04-18
; PRIOR APPLICATION NUMBER: 60/286, 683
; PRIOR FILING DATE: 2001-04-25
; Remaining Prior Application data removed - See File Wrapper or PAM.
; NUMBER OF SEQ ID NOS: 411
; SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 96
; LENGTH: 456
; TYPE: PRT
; ORGANISM: Homo sapiens
US-10-038-854-96

Query Match 31.8%; Score 739; DB 16; Length 456;
Best Local Similarity 35.4%; Pred. No. 1.3e-54;
Matches 150; Conservative 73; Mismatches 155; Indels 46; Gaps 10;

QY 5 LEEHRSLSRECEIEICDFEAKELIPQVDDTLAFMSKRVDDQCLVPLHPASLCC 64
Db 47 LEEVGNLRECEMEKCSFEAREVEFENTERTTFMKQYVDGDCESNP-----CL 98
QY 65 GHGTCTIGTGSFSCDCRSGWGRRCOREYSPLNGSGCTHYCLEEYGR-RGSCAPG 123
Db 99 NGGSKDIDINSYPCWCPFGFKNCGLDVT---CNKNGTCEQPCXNSADNKVYCSCTEG 155
QY 124 YKLGDILLQCPAYPEGGRPMKMEKKSHLK-----DTEQDEQVD----- 167
Db 156 YKLAEKQKCEPAPVPPGGRVSVQTSKLRAEAVFPDVVDVNSTEATILDNITQSTOS 215
QY 168 ----PRIDSKTRRQDSFQVYLDSSKKKLACGAVLHPVAVITLHACMDSKTLVRL 223
Db 216 PNDFTRVVGGEDAKPQFPQVY-LNGKVDACCGSIVNEMIVTAHCVGAVITVA 274
QY 224 GEYDLARMEKWEELDDIKEYFVHPNYSKST--DNDIALHQAQATLSQITVPICLPDS 281
Db 275 GHNIEETETETEQKRVNRIIPHNVNAINKNDIALLEDEPLVNSYVTPICIDAK 334
QY 282 GLAEELNOAGETIYVGMG--YHSREKAKRRRTVYANFIKIVFHNHCEVMSNV 339
Db 335 EYTNIFLKFG--SGYVSGWGRVPHKGRS-----ALVQLYRVLVDRAICLRSTKFTI 385
QY 340 SENMLACGILGDRODACEGDSGGPMVASFHGTWFLVGLVSMGEGGLAHNGVYTKVSR 399
Db 386 YNNMFCAGFBEGSCDSCGDSGSPHYTEVGTSPILGIIISWGBCKMKGKGIYTKVSR 445
QY 400 LDMT 403
Db 446 VNMV 449

RESULT 44
US-10-038-854-95
; Sequence 95, Application US/10038854
; Publication No. US20040022781A1
; GENERAL INFORMATION:
; APPLICANT: Spytek, Kimberly A
; APPLICANT: Li, Li
; APPLICANT: Wolenc, Adam R
; APPLICANT: Vermet, Corine
; APPLICANT: Eisen, Andrew J
; APPLICANT: Liu, Xiaohong
; APPLICANT: Malyankar, Uriel M
; APPLICANT: Shinkels, Richard A
; APPLICANT: Tchernev, Velizar
; APPLICANT: Spaderna, Steven K
; APPLICANT: Gorman, Linda
; APPLICANT: Kekuda, Ramesh
; APPLICANT: Patturajan, Meera
; APPLICANT: Gusev, Vladimir Y
; APPLICANT: Gangoli, Esha A
; APPLICANT: Guo, Xiaojia S
; APPLICANT: Shenoy, Suresh G
; APPLICANT: Rastelli, Luca
; APPLICANT: Casman, Stacie J

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Yy      400 IDMI 403          .: ||
Db      446 YAMI 449
                                     US-09-884-901-3
                                     RESULT 45
US-09-884-901-3
; Sequence 3, Application us/09884901
; Patent No. US2002076798A1
; GENERAL INFORMATION:
; APPLICANT: Miao, Carol
; APPLICANT: Kay, Mark
; TITLE OF INVENTION: Liver-Specific Gene Expression Cassettes, and Methods of Use
; FILE REFERENCE: UOEW-1-17396
; CURRENT APPLICATION NUMBER: US/09/884,901
; PRIOR FILING DATE: 2001-06-18
; PRIOR APPLICATION NUMBER: US 60/212,902
; PRIOR FILING DATE: 2000-06-20
; NUMBER OF SEQ ID NOS: 18
; SOFTWARE: PatentIn version 3.0
; SEQ ID NO 3
; LENGTH: 461
; TYPE: PRT
; ORGANISM: Homosapien
US-09-884-901-3

Query Match           31.7%; Score 736; DB 9; Length 461;
Best Local Similarity 35.4%; Pred. No. 2,4e-54;
Matches 150; Conservative 72; Mismatches 156; Indels 46; Gaps 10;

Yy      5 LEEIRHSSLEKCTEICDPFEAKETFGVNDTLAEWSKHVDGDCLVLPLEHPCASLCC 64
         :|||::|||::|||::|||::|||::|||::|||::|||::|||::|||::|||::|||
Db      52 LEEFVGNLRRCKMEKCSFFEARVEVTEKTFEMQIVDDQCESNF-----CL 103

Yy      65 GHGFCTIDGGSGSCCRSGMGWGRFCOREVSFLNCSLDNGCGTHCYCLEEVGM-RSCGAPG 123
         :|||::|||::|||::|||::|||::|||::|||::|||::|||::|||::|||
Db      104 NGSSCKDINSIHCPCPGFGRKNCEDYT---CNIKRKCDEGPKNSMDNNVVSCTEG 160

Yy      124 YKLGDIDLGHAVVFPGGRFWRMKEKKSHLR-----DTEDQEQDV----- 167
         :|||::|||::|||::|||::|||::|||::|||::|||::|||::|||::|||
Db      161 YPIFNKSTCEPVPFPGRGVSVSQTSLTRAFAVFPDVVNSTAFTILINDITOSTOS 220

```

```

Db      221  ENDPTWVGEDAKRGQFPWQVYV-ANGVADAFQCSNIVEMKIYTAACHCVETSVKTIYVA 279
QY      224  GEYVLRKRWKMTLDDIDIKYFVHPYNSKST--DNDIALTHAOPATLSQTIVIPICLPS 281
      280  GHHNIEHTHTQKRNRYRILIPHNNYNAIKYIHDLALLEDEFLVYNSYFPICLADK 339
QY      282  GLARELINAQGEETLVYTWG--YHSRREKREKRNRYFVNLFKIPVYHNESYVMSNV 339
      340  EYTWIPLAKG--SGYVSWGRVPHKRS-----ALVYLRVPLVDRACTLRSYKFTY 390
QY      340  SENNLCAGLISGRQACBGDSGGPMTYASPHGTWLVLYVNSWEGGLHNYGYTYVRSY 399
      391  YNNFCAGFHEGGRDSCQDSGGPHTVEGYSFLTGIIISWEECAVMKRGYLYTVRSY 450
Db      400  LDWI 403
      451  VNMI 454
QY
Db

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US-10-132-829-5

SEQ ID NO 5
LENGTH: 461
TYPE: PRT
ORGANISM: Homo sapiens

Query Match	31.7%;	Score 736;	DB 14;	Length 461;
Best Local Similarity	35.4%;	Pred. No. 2.4e-54;		
Matches 150;	Conservative 72;	Mismatches 156;	Indels 46;	Gaps 10;

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QY 5 LEEI,RISS,IEREE,CEEI,CDPEBAKE,IFQNDVDTLA,WMKSHVDQ,OCIV,LELHE,CA,SLC 64
Db 52 LEEFYQ,AN,HECMEKCS,FEAR,EVER,ENTER,TER,FMQY,VDQ,OCESNP-----CU 103
QY 65 GHGTCTID,IGSF,SD,CSGMEGR,FCQREVS,F,NCIS,LDNG,STAY,CLAEYGR,--RCS,APG 123
Db 104 NGGSCD,DD,INSYECM,CFPFEGKNC,ELDVT-----CINKRG,CEQ,CKNS,ADN,KNV,OSTEG 160
QY 124 YKGD,DL,LC,HPA,YK,FCSP,PMK,REK,KS,HLR-----DPEOD,EQVD-----167
Db 151 YRLA,NO,CS,CE,PA,PF,PC,GR,V,SV,SO,ST,CL,RA,ET,PD,VD,YS,VT,AE,IT,LD,NT,OSTOS 220
QY 168 ----PRLD,KN,TER,GR,DSP,MQV,LLDS,KKKI,AC,GA,VL,HP,SM,VL,TA,AC,MD,ESK,LL,VRU 223
Db 221 FND,FTV,WS,GE,DA,KQ,GF,PMQV,--LNG,KVA,FC,GS,IV,NE,KI,VT,AA,HC,VE,NGV,EL,TVVA 279
QY 224 GEND,LR,MK,M,LD,LD,IK,EFV,N,PK,YS,STT--DND,AL,ML,AP,RA,LS,QT,IV,PL,C,EDS 281
Db 280 GEH,HE,TE,HT,E,Q,KN,VI,RI,IR,PH,NY,MA,IN,K,NH,DL,LE,DE,PL,NA,SY,TP,CL,ADK 339
QY 282 GLA,ER,EL,NO,GO,ET,IV,GMG--YHSS,RE,KAK,KN,TF,V,LF,IK,IPV,EN,HE,SE,WM,SNV 339
Db 340 EYVNI,PL,KRG--SGV,WS,GM,OR,VR,HH,GRS-----ALV,QL,VR,PL,VD,AT,LE,BS,ET,FL 390
QY 340 SENM,LA,GI,LD,RO,DA,CE,SD,SGG,PM,VA,ST,HC,TF,IV,GL,V,SM,GE,OG,IL,NH,NGV,TK,VS,RY 399
Db 391 YNNM,FC,AG,HE,GR,SD,CO,SD,SGG,PH,VT,E,VE,ST,SLT,GI,IL,SW,EE,CAM,KG,IT,GI,TK,VS,RY 450
QY 400 LDWT 403
Db 451 VNM1 454

```

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RESULT 47
US-10-234-406-6
? Sequence 6, Application US/10234406
? Publication NO. US20030109478A1
? GENERAL INFORMATION:
? APPLICANT: FEWEL, Jason G.
? APPLICANT: MACLAUGHLIN, Fiona
? APPLICANT: SMITH, Louis C.
? APPLICANT: NICOL, Francois
? APPLICANT: ROLAND, Alain
? TITLE OF INVENTION: NOCLETIC ACID FORMULATIONS FOR GENE DELIVERY AND METHODS OF USE
? FILE REFERENCE: 54964.8303.US01
? CURRENT APPLICATION NUMBER: US/10/234,406
? CURRENT FILING DATE: 2002-09-03
? PRIOR APPLICATION NUMBER: US 60/187,236
? PRIOR FILING DATE: 2000-03-03
? PRIOR APPLICATION NUMBER: US 60/261,751
? PRIOR FILING DATE: 2001-01-16
? PRIOR APPLICATION NUMBER: PCT/US01/06953
? PRIOR FILING DATE: 2001-03-02
? NUMBER OF SEQ ID NOS: 8
? SOFTWARE: PatentIn version 3.1
? SEQ ID NO 6
? LENGTH: 461

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; TYPE: PRT
; ORGANISM: Artificial Sequence
FEATURE:
; OTHER INFORMATION: Expression plasmid pFN0945 having natural sequence encoding human
; OTHER INFORMATION: coagulation factor IX
US-10-234-406-6

```

Query Match	31.7%;	Score 736;	DB 14;	Length 461;
Best Local Similarity	35.4%;	Pred. No. 2.4e-54;		
Matches 150;	Conservative 72;	Mismatches 156;	Indels 46;	Gaps 10;

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QY 5 IELRRSSIEBECIEECIDFEBAKEIFQONVDITLAFMSKIVDQOCVLPJLHNCASLCC 64
Db 52 IEFBYGKULREBCEMKSCFBEAREVFNENTERTEFMQYVDGDQCESNF-----CL 103
QY 65 GHGTCLDIGSFSQDORSMBRPOQREVSFLNGSLDNGSCTHYCLEBYGMR-RGCSABG 123
Db 104 NGSCSDCDIDINSYECQCFEFGKCELDVLT---CNIKNRCEOFCKNSADNRVVCSTGB 160
QY 124 YKSGDILLQCPHAKVFCGRPWKMEKKRSJHLKR-----DTEQEDQVDV----- 167
Db 161 YRLAEKQKSCBPAPVPPCGRVSVGQTSKULRAEYTFPPVQVNVASLAEILIDNITQSTGS 220
QY 168 ----PELIDGKOTREGDSEWQVLLDSSKKKLAGAVLHPSPWLTAACMBESKKLIVRL 223
Db 221 ENDFPTVWGSZDAPKQGFEMQVY--LNGKVLACGSGSIYNEKMTVIAHCEVEGYKIVVA 279
QY 224 GEYDLARREKKEMLDLKXEVFNRYNSKITT--DNDIALHLAOPATLQOTVYICLDPG 281
Db 280 GEMNIEETHTTEQKRVNIIIPHNRYMAALINKYNDIALMLBDEPVLVLSYVTPPICLADK 339
QY 282 GLAEPLNQAQGETLVYNGG--YHSSREKAKRNTFYANFIKIPVPHNECSSEVMNW 339
Db 340 EYNNITLKG--SGYVSQMGKRVFKHKS-----ALVLQYLRAPVLVDRATCLASTKFTI 390
QY 340 SENNLCAGLDRODACEDSGCPMVASFHGTWFLVGLVMSGECGLJANNYVTTIKTSRI 399
Db 391 YNNMFCAGFHGEGRDSCQSGSPHTEVLEQTSFLTGIIISWGBECAMKQKYGVIYTKVSRY 450
QY 400 LDMT 403
Db 451 VNM 454

```

```

/ RESULT 48
/ US-10-234-406-B
/ Sequence 8, Application US/10234406
/ Publication No. US20030109478B1
/ GENERAL INFORMATION:
/ APPLICANT: FEMEL, Jason G.
/ APPLICANT: MACLAUGHLIN, Fiona
/ APPLICANT: SMITH, Louis C.
/ APPLICANT: NICOL, Francois
/ APPLICANT: ROLLAND, Alain
/ TITLE OF INVENTION: NUCLEIC ACID FORMULATIONS FOR GENE DELIVERY AND METHODS OF USE
/ FILE REFERENCE: 54964.9303.US01
/ CURRENT APPLICATION NUMBER: US/10/234,406
/ CURRENT FILING DATE: 2002-09-03
/ PRIOR APPLICATION NUMBER: US 60/187,236
/ PRIOR FILING DATE: 2000-03-03
/ PRIOR APPLICATION NUMBER: US 60/261,751
/ PRIOR FILING DATE: 2001-01-16
/ PRIOR APPLICATION NUMBER: PCT/US01/06953
/ PRIOR FILING DATE: 2001-03-02
/ NUMBER OF SEQ ID NOS: 8
/ SOFTWARE: PatentIn version 3.1
/ SEQ ID NO 8
/
/ LENGTH: 461
/ TYPE: PRM
/ ORGANISM: Artificial Sequence
/ FEATURE:
/ OTHER INFORMATION: Expression plasmid pEN1645 having codon optimized sequence encoded
/ OTHER INFORMATION: ng for human coagulation factor IX (786) ... (2171).
/

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; PRIOR APPLICATION NUMBER: 60/279,863
; PRIOR FILING DATE: 2001-03-29
; PRIOR APPLICATION NUMBER: 60/283,889
; PRIOR FILING DATE: 2001-04-13
; PRIOR APPLICATION NUMBER: 60/284,447
; PRIOR FILING DATE: 2001-04-18
; PRIOR APPLICATION NUMBER: 60/286,683
; PRIOR FILING DATE: 2001-04-25
; Remaining Prior Application data removed - See File Wrapper or PALM.
; NUMBER OF SEQ ID NOS: 411
; SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 92
; LENGTH: 461
; TYPE: PRT
; ORGANISM: Homo sapiens
; US-10-038-854-92

Query Match          31.7%; Score 736; DB 16; Length 461;
Best Local Similarity 35.4%; Pred. No. 2.4e-54;
Matches 150; Conservative 72; Mismatches 156; Indels 46; Gaps 10;

QY 5 LEEIARHSLEBCEIEICDEBEAKEIFQNVDDTLAFWSKRVGDCQVLPLEHPCASLCC 64
   |||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:
Db 52 LEEFVQGNLERECMEKCSFEARVFEVNTERTTEFWKQYVGDQCESNP-----CT 103
QY 65 GHGTCIDIGSFSCDCRSGMEGRFCOREVFLNCSLNGCCHYCLEEVMR-RGSCARG 123
   |||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:
Db 104 NGSSCKODINSTECPCFEGEGKCELDVT--CNKNGCEQFCNSADNKVCSCTBE 160
QY 124 YKLDGDLQCHPAVFPCCRPWKMEKRSHLKR-----DTEDEQDQVD----- 167
   |||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:
Db 161 YRLAENKSCERAVFPFCGRSVVSQSKLTRAEAFPDVYNSTAEITLIDNTOSTGS 220
QY 168 ----PRLIDKMTREGDSPWQVVLDSKKKLACGAVLIHSVLTAAACMBESKLLVRL 223
   |||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:
Db 221 FNDFTRVGGEADAKRGQFPWQV--LNGKVDACGGSIVNEKMTVTAHCEVGKTVVA 279
QY 224 GEYDLARMEKMELDLIDKEVFVHNYSKST--DNDIALHLAOPATLSQTIPTICLPDS 281
   |||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:
Db 280 GSHNTEETETEQKKNVIRLIPHNINAAINKYNDIMLLEBPLVANSYVTFICLADK 339
QY 282 GLARELNOAGETLVYTGW--YHSREKAKRNTFVNFIKIPVPHNECEVMGNMY 339
   |||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:
Db 340 EYTNIFLKG--SGVSGMGRVPHKRS-----ALVLYLRAVPLNDRATCLSTRFTI 390
QY 340 SENMLCAGILIGDRQDCRSDSGSPVNASFHGTWFLVGVMSGCGGILNRYVYTKRSY 399
   |||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:
Db 391 YNNMFCAGFHEGGRSDCGSDSGPHVTEVGTISFLGIISWGECAWKGKGYITKYRSY 450
QY 400 LPMI 403
   |||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:
Db 451 VMT 454

RESULT 51
US-10-038-854-93
; Sequence 93, Application US/10038854
; Publication No. US20040022781A1
; GENERAL INFORMATION:
; APPLICANT: Spytek, Kimberly A
; APPLICANT: Li, Li
; APPLICANT: Wolenc, Adam R
; APPLICANT: Vernet, Corine
; APPLICANT: Eissen, Andrew J
; APPLICANT: Liu, Xiaotong
; APPLICANT: Maizankar, Uriel M
; APPLICANT: Shinkels, Richard A
; APPLICANT: Tchernav, Vellizar
; APPLICANT: Spaderma, Steven K
; APPLICANT: Gorman, Linda
; APPLICANT: Kekuda, Ramesh
; APPLICANT: Faturajan, Meera
; APPLICANT: Gusev, Vladimir Y

; APPLICANT: Gangoli, Esha A
; APPLICANT: Guo, Xiaojia S
; APPLICANT: Shenoy, Suresh G
; APPLICANT: Rastelli, Luca
; APPLICANT: Caeman, Stacie J
; APPLICANT: Boldog, Ferenc
; APPLICANT: Burgess, Catherine E
; APPLICANT: Edinger, Shlomit R
; APPLICANT: Ellerman, Karen
; APPLICANT: Gunther, Erik
; APPLICANT: Smithson, Glenda
; APPLICANT: Millet, Isabelle
; APPLICANT: MacDougall, John R
; TITLE OF INVENTION: Proteins and Nucleic Acids Encoding Same
; ETE REFERENCE: 21402-230
; CURRENT APPLICATION NUMBER: US/10/038,854
; PRIOR FILING DATE: 2003-01-22
; PRIOR APPLICATION NUMBER: 60/258,928
; PRIOR FILING DATE: 2000-12-29
; PRIOR APPLICATION NUMBER: 60/259,415
; PRIOR FILING DATE: 2001-01-02
; PRIOR APPLICATION NUMBER: 60/259,785
; PRIOR FILING DATE: 2001-01-04
; PRIOR APPLICATION NUMBER: 60/269,814
; PRIOR FILING DATE: 2001-02-20
; PRIOR APPLICATION NUMBER: 60/279,832
; PRIOR FILING DATE: 2001-03-29
; PRIOR APPLICATION NUMBER: 60/279,833
; PRIOR FILING DATE: 2001-03-29
; PRIOR APPLICATION NUMBER: 60/279,863
; PRIOR FILING DATE: 2001-03-29
; PRIOR APPLICATION NUMBER: 60/283,889
; PRIOR FILING DATE: 2001-04-13
; PRIOR APPLICATION NUMBER: 60/284,447
; PRIOR FILING DATE: 2001-04-18
; PRIOR APPLICATION NUMBER: 60/286,683
; Remaining Prior Application data removed - See File Wrapper or PALM.
; NUMBER OF SEQ ID NOS: 411
; SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 93
; LENGTH: 461
; TYPE: PRT
; ORGANISM: Homo sapiens
; US-10-038-854-93

Query Match          31.7%; Score 736; DB 16; Length 461;
Best Local Similarity 35.4%; Pred. No. 2.4e-54;
Matches 150; Conservative 72; Mismatches 156; Indels 46; Gaps 10;

QY 5 LEEIARHSLEBCEIEICDEBEAKEIFQNVDDTLAFWSKRVGDCQVLPLEHPCASLCC 64
   |||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:
Db 52 LEEFVQGNLERECMEKCSFEARVFEVNTERTTEFWKQYVGDQCESNP-----CT 103
QY 65 GHGTCIDIGSFSCDCRSGMEGRFCOREVFLNCSLNGCCHYCLEEVMR-RGSCARG 123
   |||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:
Db 104 NGSSCKODINSTECPCFEGEGKCELDVT--CNKNGCEQFCNSADNKVCSCTBE 160
QY 124 YKLDGDLQCHPAVFPCCRPWKMEKRSHLKR-----DTEDEQDQVD----- 167
   |||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:
Db 161 YRLAENKSCERAVFPFCGRSVVSQSKLTRAEAFPDVYNSTAEITLIDNTOSTGS 220
QY 168 ----PRLIDKMTREGDSPWQVVLDSKKKLACGAVLIHSVLTAAACMBESKLLVRL 223
   |||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:
Db 221 FNDFTRVGGEADAKRGQFPWQV--LNGKVDACGGSIVNEKMTVTAHCEVGKTVVA 279
QY 224 GEYDLARMEKMELDLIDKEVFVHNYSKST--DNDIALHLAOPATLSQTIPTICLPDS 281
   |||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:
Db 280 GSHNTEETETEQKKNVIRLIPHNINAAINKYNDIMLLEBPLVANSYVTFICLADK 339
QY 282 GLARELNOAGETLVYTGW--YHSREKAKRNTFVNFIKIPVPHNECEVMGNMY 339
   |||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:
Db 340 EYTNIFLKG--SGVSGMGRVPHKRS-----ALVLYLRAVPLNDRATCLSTRFTI 390

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QY 340 SENLACGILGRDACEGDSGPGVAFSHGHTFLVGLVSNBGGCLHNYGVTKYSRY 399
D 391 YNNMFCAGFHGGRDSCQDSGPGHYTEVGTSTFLTGILISWGBCKMKKGYITKYSRY 450
QY 400 LDMI 403
D 451 VNMV 454

RESULT 52
US-10-239-498A-5
; Sequence 5, Application US/10239498A
; Publication No. US2004002333A1
; GENERAL INFORMATION:
; APPLICANT: Hauser, Charlotte
; APPLICANT: Horster, Andrea
; APPLICANT: Schroder, Carola
; APPLICANT: Leherer, Michael
; TITLE OF INVENTION: Production of Recombinant Blood Clotting Factors in
; TITLE OF INVENTION: Human Cell Lines
; FILE REFERENCE: 80977.0001
; CURRENT FILING DATE: 2003-07-08
; PRIOR APPLICATION NUMBER: PCT/EP01/03220
; PRIOR FILING DATE: 2001-03-21
; NUMBER OF SEQ ID NOS: 17
; SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 5
; LENGTH: 461
; TYPE: PRT
; ORGANISM: Homo sapiens
US-10-239-498A-5

Query Match 31.7%; Score 736; DB 16; Length 461;
Best Local Similarity 35.4%; Pred. No. 2.4e-54;
Matches 150; Conservative 72; Mismatches 156; Indels 46; Gaps 10;

QY 5 LEEELRSSLEBCEIEICDFEAKEIFQVNDTLAFWSKGVDDCVLPLEHPGASLCC 64
D 52 LEEFVGNLERECMEKCSFEARVEFENTERTEFEKQVVDGDCESNP-----CL 103
QY 65 GHGCTIDIGSPSCDCSGWGRFCQREVSEFLNSGCTHYCLEBVGMR-RCSGAPG 123
D 104 NGSCCKDDINSYECWCPGFGKNCGLDVT--CNINGCQGFCKNSADKVCSTG 160
QY 124 YKLDLQCHPAVAFPCGRPWKMEKKSILKR-----DTEQDQDQD----- 167
D 161 YRLAENQKCEPAVFPGRVSVSQTSLTRAFAVFPDVVNSTEATITLIDNTOSTOS 220
QY 168 ----PRLDGKMTTRGDSPWQVVLDSKKKACAGAVLIHPSWVLAHQMDESKLVL 223
D 221 FNDTRVVGSDAKGQFPMQVY-LNGKYDAFCGGSIVNKKMLVTAHCVEVTKITVA 279
QY 224 GEYDLRMEKMLDIDKEVFPVHNSKSTT--DNDIALHLAQPATLSQITVPCLPDS 281
D 280 GEHNIETETQKKNVIRIIPHNHNAALINKYNDIALLEDEPLVINSYVTPICLADK 339
QY 282 GLARELNQAGETLYTGMG--YHSREKAKRNKTVLNFIKI PVPHNCESEVMNMY 339
D 340 EYNTIFLKRG--SGYVSGMGRVFHKGRS-----ALVQLYLVPLVDRATCLASTKETI 390
QY 340 SENLACGILGRDACEGDSGPGVAFSHGHTFLVGLVSNBGGCLHNYGVTKYSRY 399
D 391 YNNMFCAGFHGGRDSCQDSGPGHYTEVGTSTFLTGILISWGBCKMKKGYITKYSRY 450
QY 400 LDMI 403
D 451 VNMV 454

RESULT 53
US-09-118-748-2
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; Sequence 2, Application US/09118748A
; Patent No. US20020031799A1
; GENERAL INFORMATION:
; APPLICANT: Staiford, Darrel W.
; APPLICANT: Chang, Jinli
; TITLE OF INVENTION: Factor IX Antihemophilic Factor with Increased Clotting
; TITLE OF INVENTION: Activity
; FILE REFERENCE: 5470-183
; CURRENT APPLICATION NUMBER: US/09/118,748A
; CURRENT FILING DATE: 1998-07-17
; EARLIER APPLICATION NUMBER: 60/053,571
; EARLIER FILING DATE: 1997-07-21
; NUMBER OF SEQ ID NOS: 2
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 2
; LENGTH: 415
; TYPE: PRT
; ORGANISM: Homo sapiens
US-09-118-748-2

Query Match 31.6%; Score 735; DB 9; Length 415;
Best Local Similarity 35.4%; Pred. No. 2.5e-54;
Matches 150; Conservative 72; Mismatches 156; Indels 46; Gaps 10;

QY 5 LEEELRSSLEBCEIEICDFEAKEIFQVNDTLAFWSKGVDDCVLPLEHPGASLCC 64
D 6 LEEFVGNLERECMEKCSFEARVEFENTERTEFEKQVVDGDCESNP-----CL 57
QY 65 GHGCTIDIGSPSCDCSGWGRFCQREVSEFLNSGCTHYCLEBVGMR-RCSGAPG 123
D 58 NGSCCKDDINSYECWCPGFGKNCGLDVT--CNINGCQGFCKNSADKVCSTG 114
QY 124 YKLDLQCHPAVAFPCGRPWKMEKKSILKR-----DTEQDQDQD----- 167
D 161 YRLAENQKCEPAVFPGRVSVSQTSLTRAFAVFPDVVNSTEATITLIDNTOSTOS 174
QY 168 ----PRLDGKMTTRGDSPWQVVLDSKKKACAGAVLIHPSWVLAHQMDESKLVL 223
D 221 FNDTRVVGSDAKGQFPMQVY-LNGKYDAFCGGSIVNKKMLVTAHCVEVTKITVA 233
QY 224 GEYDLRMEKMLDIDKEVFPVHNSKSTT--DNDIALHLAQPATLSQITVPCLPDS 281
D 280 GEHNIETETQKKNVIRIIPHNHNAALINKYNDIALLEDEPLVINSYVTPICLADK 293
QY 282 GLARELNQAGETLYTGMG--YHSREKAKRNKTVLNFIKI PVPHNCESEVMNMY 339
D 294 EYNTIFLKRG--SGYVSGMGRVFHKGRS-----ALVQLYLVPLVDRATCLASTKETI 344
QY 340 SENLACGILGRDACEGDSGPGVAFSHGHTFLVGLVSNBGGCLHNYGVTKYSRY 399
D 345 YNNMFCAGFHGGRDSCQDSGPGHYTEVGTSTFLTGILISWGBCKMKKGYITKYSRY 404
QY 400 LDMI 403
D 405 VNMV 408

RESULT 54
US-09-782-587B-1
; Sequence 1, Application US/09782587B
; Publication No. US20030096338A1
; GENERAL INFORMATION:
; APPLICANT: PEDERSEN, ANDERS H.
; APPLICANT: ANDERSON, KIM V.
; APPLICANT: BORNAES, CLAUS
; TITLE OF INVENTION: FACTOR VII OR VIIA-LIKE MOLECULES
; FILE REFERENCE: 31-001100US
; CURRENT APPLICATION NUMBER: US/09/782,587B
; CURRENT FILING DATE: 2002-03-26
; PRIOR APPLICATION NUMBER: PA 2000 00218
; PRIOR FILING DATE: 2000-02-11
; PRIOR APPLICATION NUMBER: 60/184,036
; PRIOR FILING DATE: 2000-02-22
```

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1 PRIOR APPLICATION NUMBER: 60/241,916
2 PRIOR FILING DATE: 2000-10-18
3 NUMBER OF SEQ ID NOS: 19
4 SOFTWARE: PatentIn Ver. 2.1
5 SEQ ID NO 1
6 LENGTH: 406
7 TYPE: PRT
8 ORGANISM: Homo sapiens
9 FEATURE:
10 NAME/KEY: MOD RES
11 LOCATION: (6)..(7)
12 OTHER INFORMATION: Gamma carboxyglutamic acid or glutamic acid
13 NAME/KEY: MOD RES
14 LOCATION: (14)
15 OTHER INFORMATION: Gamma carboxyglutamic acid or glutamic acid
16 NAME/KEY: MOD RES
17 LOCATION: (16)
18 OTHER INFORMATION: Gamma carboxyglutamic acid or glutamic acid
19 NAME/KEY: MOD RES
20 LOCATION: (19)..(20)
21 OTHER INFORMATION: Gamma carboxyglutamic acid or glutamic acid
22 NAME/KEY: MOD RES
23 LOCATION: (25)..(26)
24 OTHER INFORMATION: Gamma carboxyglutamic acid or glutamic acid
25 NAME/KEY: MOD RES
26 LOCATION: (29)
27 OTHER INFORMATION: Gamma carboxyglutamic acid or glutamic acid
28 NAME/KEY: MOD RES
29 LOCATION: (35)
30 OTHER INFORMATION: Gamma carboxyglutamic acid or glutamic acid
31 JS-09-782-587B-1

```

Query Match	31.2%;	Score 726;	DB 10;	Length 406;
Best Local Similarity	36.6%;	Pred. No. 1.4e-53;		
Matches	155;	Conservative	75;	Mismatches 157; Indels 36; Gaps 10
QY	1	ANSELEELHSSLSFRBCIELEIDPEEAKSIFQVAVDDTLAFNSKAVDGDGCVLPIERPCA	60	
Db	1	ANAFLLXLRPGSLKRXCKKXXCSFYKAXLIFKDAKTKLFWISYSDGDC-----AS	52	
QY	61	SLLCGHGTCIDIGISFSCDGSNGEGARPCQ-REVSPLNCSLDNCGCTHGLAEVEMR-C	118	
Db	53	SPQNGSGSKQDLSYICFCPLAFBGRNCHTHDDOLICNNENSGEYCSQSHYSTRSC	112	
QY	119	SCAPGKLGDDLQCHPAVFPCKGRFWKREKRSKLRDTEDEQDQVRLIDGKTRR	178	
Db	113	RCHEGSLADGVSCFTEVAPCGK-IPILEKNA-----SKPGQRIVGSKYCPK	161	
QY	179	GDSPWQVVLIDSKKKLACGAVLIHPSWLTAAKMDSEK--KLLVLAGYDLREMEKE	235	
Db	162	GECPWQVLLIVNGQL-CGSLTLINTIWWYSAAHCPCPKIKNNRNLIATVGLHSDLSHODE	220	
QY	236	LDLDIKVEVPHNTSKSTTDNDIALIHLAQPAULSGTIVICLPDPSGLAREINDAQET	295	
Db	221	QSRRAVQVILPSTYVPGTHNDIALIRLHQVVLTHVPLTECLPERSERTIAFV-RFS	279	
QY	296	LYMGWGHSSREKEAKNRFVLIKIPVPHNESEYM-----SMWSENNLCAGILG	350	
Db	280	LVSWMQGLIDRKATL-----LELMVNIENPRMLTODCLQSKRKVSDSPNITETMFCAGISD	334	
QY	351	DRDAPGSDSGGFWMTASFHGTWFLVGLVSWGSGGLHNYGYTKVSRILWLIHQ IDK	410	
Db	335	GSKDSCGSDGGFBHATYHRTGWTLTGIVSWGCGATGFGVYTVSQYTEWLQKIMRSE	394	
QY	411	EAP 413		
Db	395	PRP 397		

RESULT 55
US-10-617-500-1
; Sequence 1, Application US/10617500
; Publication No. US20040072755A1

```

GENERAL INFORMATION:
APPLICANT: Novo Nordisk Pharmaceuticals, Inc.
APPLICANT: Semmick, Henning R
APPLICANT: Bjorn, Soren E
APPLICANT: Petersen, Lars C
TITLE OF INVENTION: TP Antagonist
FILE REFERENCE: 6510.200-US
CURRENT APPLICATION NUMBER: US/10/617,500
CURRENT FILING DATE: 2003-07-11
PRIOR APPLICATION NUMBER: Danish Application No. PA 2002 01100
PRIOR FILING DATE: 2002-07-12
PRIOR APPLICATION NUMBER: US 60/404,567
PRIOR FILING DATE: 2002-08-19
NUMBER OF SEQ ID NOS: 3
SOFTWARE: PatentIn version 3.2
SEQ ID NO 1
LENGTH: 406
TYPE: PRT
ORGANISM: Artificial
FEATURE:
OTHER INFORMATION: Synthetic
FEATURE:
NAME/KEY: MISC FEATURE
LOCATION: (1)_(406)
OTHER INFORMATION: Xaa=4-carboxyglutamic acid (gamma-carboxyglutamate)
US-10-617-500-1

```

```

Query Match      31.2%; Score 726; DB 12; Length 406;
Best Local Similarity 36.6%; Pred. No. 1.4e-53;
Match 155; Conservative 75; Mismatches 157; Indels 36; Gaps 10;

QY      1  ANSFLEELHSHSLRECEIEICDFEAKKEIFQAVNDVDTIAFMSKHFVDGDCVLPLEHPK 60
DB      1  ANAFIXXILRPSGLARXCKKXCCSFYKARXIFKQAKRTLFWISYSDGDC-----AS 52

QY      61  SLCCGGTCITDGISSPSCCRSGMEGRFQ-REVSFLTCLSDNGGCGHYCLLEEVGMR-C 118
DB      53  SPQNGSGSKQDLSYICFLPAPFGRNCRHKDDQLCNENSGEQYCSPHGTGRSC 112

QY      119  SCAPGYLQDLDLQHPAVKFCGRPMWERMEKRSRLRDTEDQEDQVDPRLIDGKTR 178
DB      113  RHEGRSLTADGVSCTPLVAYFCGR-IPLEKRNA-----SKPGRLVGRKCPK 161

QY      179  GDSPWQVTLTDSKKKILACGAVLHPSWTLTAAQMDSEK--KLVLVLEGYDLRWEKME 235
DB      162  GECPQDVLTLVAGQQL-CGGTLTNTITVWSSAAHCEPKIKNNRNLIVLNEHLSSHGDE 220

QY      236  LDDIDIKVEVAFBNSKSTTNDIADLHLAPATLQSTTVPLCLPDSGLARELNDAQET 295
DB      221  QSRVQAQVILPETYVPGTNHDIALLRIHQPVYLTQHVPLCLPERIFSERTLAFV-RFS 279

QY      296  LVYMGVGHSSREKKAENRFFVLNFIKLPVPHNECSYV-----SNMVSNNMLCAGILG 350
DB      280  LVASGGLDRLGRATL-----LELMTLVNPLRLMDDCLQSKSKVAGDSNLTIMPFAGVSD 334

QY      351  DRDACCBDGGGPMVAVSFHGTWFLVGLVSGEGCLNNAVGYTTKVSRYLNDIHGHTRDK 410
DB      335  GSKDSCKADSGGPHATIRGTWTLTGIVSGGCGATVGHGIVTIRVQYILEWLOKLKMRSE 394

QY      411  EAP 413
DB      395  PRP 397

```

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RESULT 56
US-10-109-498-1
; Sequence 1, Application US/10109498
; Publication No. US20030044908A1
GENERAL INFORMATION
; APPLICANT: Persson, Egon
; TITLE OF INVENTION: Coagulation Factor VII Derivatives
; FILE REFERENCE: 6286-200-US
; CURRENT APPLICATION NUMBER: US/10/109_498

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QY 1 ANSFLELRHSSLEBCEIEICDFEAKEIFQNVDDTLAFMSKAVDGDCLVLPLEHPCA 60
DB 1 ANSFLELRHSSLEBCEIEICDFEAKEIFQNVDDTLAFMSKAVDGDCLVLPLEHPCA 52
QY 61 SLCCGHTCTIDIGSFSCDCRSMBEGRCQ-REVSLFNCSLDNGGCTHYCLEHVMRR-C 118
DB 53 SPQNGSGCKDQLQSYICFLPAFEGNCEHNDQILCVNENGCEBQYCSHDTGKRS 112
QY 119 SCAPGYKLGDDLLQCHAVKFCPCGPMKMKKSHLKEDTEDQEDQVDPRLIDGQNTK 178
DB 113 RHEGYSLADGVSCTPTEYPCCK-IPLEKRNA-----SKPGRIVGKVCPR 161
QY 179 GDSBPQVVLIDSKKKLACGAVLHPSWVLTAAHOMDESK---KLIVLGEVDLRRMEKE 235
DB 162 GECPMQVLLVNGAQL-CGGTLINTITWVSAHCFDKIKMNRMLIIVGENDLSEHGD 220
QY 236 LDDIXEVFVHNYSKSTTNDIALHLAOPATLSQITVPCIPDGLAERELNOAQGT 295
DB 221 QSRVAVQVILIPSTVPGTTHDIALRLHQPVLTIDHVPCLPBTFSERTLAFV-RFS 279
QY 296 LVTGNGYHSREKAKRRFTVNFKIPVPHNECEVM-----SNMVSNNLCAHILG 350
DB 280 LVSGMQLDREGATL-----LELMTLVNVRMTQDCLQSRKVGDSPTNTEYMFCAGYSD 334
QY 351 DRDACEGDSGGPMVASFHGTWFLVGLVSGGCGCLHNYGVYTKYSRLDTHGHRDK 410
DB 335 GSKDSCGKDSGGPMHATHRGTYLTGIVSGGCAVGHGVTVSQTIVMLQKMBSE 394
QY 411 EAP 413
DB 395 PRP 397

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RESULT 59
US-10-386-898-7
/ Sequence 7, Application US/10386898
/ Publication No. US20030229018A1
/ GENERAL INFORMATION:
/ APPLICANT: No. US20030229018A1o No. US20030229018A1dik Pharmaceutical, Inc.
/ APPLICANT: Kjalke, Marianne
/ APPLICANT: Jakobsen, Palle
/ APPLICANT: Stemnick, Henning Ralf
/ TITLE OF INVENTION: DIMERIC TF ANTAGONIST
/ FILE REFERENCE: 6445-200-US
/ CURRENT APPLICATION NUMBER: US/10/386,898
/ CURRENT FILING DATE: 2003-03-12
/ PRIOR APPLICATION NUMBER: Danish Application PA 2002 00373
/ PRIOR FILING DATE: 2002-03-12
/ PRIOR APPLICATION NUMBER: US 60/365,935
/ PRIOR FILING DATE: 2002-03-19
/ NUMBER OF SEQ ID NOS: 7
/ SOFTWARE: PatentIn version 3.2
/ SEQ ID NO 7
/ LENGTH: 406
/ TYPE: PRT
/ ORGANISM: human coagulation Factor VII
/ FEATURE:
/ NAME/KEY: MISC FEATURE
/ LOCATION: (1)..(406)
/ OTHER INFORMATION: xaa means 4-carboxyglutamic acid (gamma-carboxyglutamate)
/ US-10-386-898-7

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Query Match 31.2%; Score 726; DB 15; Length 406;
Best Local Similarity 36.6%; Pred. No. 1,4e-53;
Matches 155; Conservative 75; Mismatches 157; Indels 36; Gaps 10;

```

```

QY 1 ANSFLELRHSSLEBCEIEICDFEAKEIFQNVDDTLAFMSKAVDGDCLVLPLEHPCA 60
DB 1 ANSFLELRHSSLEBCEIEICDFEAKEIFQNVDDTLAFMSKAVDGDCLVLPLEHPCA 52
QY 61 SLCCGHTCTIDIGSFSCDCRSMBEGRCQ-REVSLFNCSLDNGGCTHYCLEHVMRR-C 118
DB 53 SPQNGSGCKDQLQSYICFLPAFEGNCEHNDQILCVNENGCEBQYCSHDTGKRS 112

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QY 119 SCAPGYKLGDDLLQCHAVKFCPCGPMKMKKSHLKEDTEDQEDQVDPRLIDGQNTK 178
DB 113 RHEGYSLADGVSCTPTEYPCCK-IPLEKRNA-----SKPGRIVGKVCPR 161
QY 179 GDSBPQVVLIDSKKKLACGAVLHPSWVLTAAHOMDESK---KLIVLGEVDLRRMEKE 235
DB 162 GECPMQVLLVNGAQL-CGGTLINTITWVSAHCFDKIKMNRMLIIVGENDLSEHGD 220
QY 236 LDDIXEVFVHNYSKSTTNDIALHLAOPATLSQITVPCIPDGLAERELNOAQGT 295
DB 221 QSRVAVQVILIPSTVPGTTHDIALRLHQPVLTIDHVPCLPBTFSERTLAFV-RFS 279
QY 296 LVTGNGYHSREKAKRRFTVNFKIPVPHNECEVM-----SNMVSNNLCAHILG 350
DB 280 LVSGMQLDREGATL-----LELMTLVNVRMTQDCLQSRKVGDSPTNTEYMFCAGYSD 334
QY 351 DRDACEGDSGGPMVASFHGTWFLVGLVSGGCGCLHNYGVYTKYSRLDTHGHRDK 410
DB 335 GSKDSCGKDSGGPMHATHRGTYLTGIVSGGCAVGHGVTVSQTIVMLQKMBSE 394
QY 411 EAP 413
DB 395 PRP 397

```

```

RESULT 60
US-10-411-037-10
/ Sequence 10, Application US/10411037
/ Publication No. US2004004346A1
/ GENERAL INFORMATION:
/ APPLICANT: Neose Technologies, Inc.
/ APPLICANT: Defrees, Shawn
/ APPLICANT: Zopf, David
/ APPLICANT: Bayer, Robert
/ APPLICANT: Hakes, David
/ APPLICANT: Chen, Xi
/ TITLE OF INVENTION: ALPHA GALACTOSIDASE A
/ FILE REFERENCE: 040853-01-5082
/ CURRENT APPLICATION NUMBER: US/10/411,037
/ CURRENT FILING DATE: 2003-04-09
/ PRIOR APPLICATION NUMBER: US 60/328,523
/ PRIOR FILING DATE: 2001-10-10
/ PRIOR APPLICATION NUMBER: US 60/344,692
/ PRIOR FILING DATE: 2001-10-19
/ PRIOR APPLICATION NUMBER: US 60/387,292
/ PRIOR FILING DATE: 2002-06-07
/ PRIOR APPLICATION NUMBER: US 60/391,777
/ PRIOR FILING DATE: 2002-06-25
/ PRIOR APPLICATION NUMBER: US 60/396,594
/ PRIOR FILING DATE: 2002-07-17
/ PRIOR APPLICATION NUMBER: US 60/404,249
/ PRIOR FILING DATE: 2002-08-16
/ PRIOR APPLICATION NUMBER: US 60/407,527
/ PRIOR FILING DATE: 2002-08-28
/ NUMBER OF SEQ ID NOS: 75
/ SOFTWARE: PatentIn version 3.2
/ SEQ ID NO 10
/ LENGTH: 462
/ TYPE: PRT
/ ORGANISM: Homo sapiens
/ US-10-411-037-10

```

```

Query Match 31.2%; Score 725.5; DB 12; Length 462;
Best Local Similarity 35.4%; Pred. No. 1.9e-53;
Matches 151; Conservative 69; Mismatches 157; Indels 49; Gaps 11;

```

```

QY 5 LEBIRHSSLEBCEIEICDFEAKEIFQNVDDTLAFMSKAVDGDCLVLPLEHPCA 64
DB 52 LEBVQGNLEFRCMEKCSFEEREFVNTKTEFMKQVVDGDCBSP-----CL 103

```

QY 65 GHGCTCIDIGSPSCDRCSGMEGRFCQREVSFLNCSLDNGGTHYCLEVGNR-RSCSAPG 123
 DB 104 NGGSCCKDINSYECWCFPGFEGKNCELDVT---CNTRKRCQPCCKNSADNKVVCSTEG 160
 QY 124 YKLGDDLLQCHPAVKPCGRPWKMEKKRSHLKADTEDQEDQVDP-----168
 DB 161 YRLANQSCCEPAVFPFCGRVSVQTSKLTARAAYEPD-VQVYVPTAEITLIDNTIGSTQ 219
 QY 169 -----RLIDGKTRRGDSFWQVLLDSKKKLACGAVLIHPSWLTAAHOMDESKQLVR 222
 DB 220 SFNDFTRVVGEGDAKFGQFPQVY-LNGKVDAFCGGSIVNEKMTVTAHCVETGVXITIV 278
 QY 223 LGEYDLRRMEKMLDD-LKEVYVHPNYSKT---DNDAI.LHLAOPATLSQTIPICLP 279
 DB 279 AGSHNIEETETEKRNVTIRALIPHNNAINKINDALALDELDEPLVINSYVTPICIA 338
 QY 280 DSGLAERELNQAQETLVYTGWG--YHSSREKEAKRNRTVLFKIPVPHNECEVMSN 337
 DB 339 DKEYTNI.FLXKG--SGYVSGMARVPHKGRS-----ALVLQYLRVPLVDRAATCLRSTKF 389
 QY 338 MVEENMLCAGTLGRDACEGDSGSPWYASPHGTWFLVGLVSWGCGGLAHNGYVYTVS 397
 DB 390 TLYNNMFCAGFHEGGSDSCGDSGGFHVTEVGTSLTGLISWBECCAMKKGKGIYTVS 449
 QY 398 RYLDWI 403
 DB 450 RYVNM 455

RESULT 61

US-10-411-026-10
 ; Sequence 10, Application US/10411026
 ; Publication No. US20040063911A1
 ; GENERAL INFORMATION:
 ; APPLICANT: Neose Technologies, Inc.
 ; APPLICANT: Defrees, Shawn
 ; APPLICANT: Zopf, David
 ; APPLICANT: Bayer, Robert
 ; APPLICANT: Hakes, David
 ; APPLICANT: Chen, Xi
 ; TITLE OF INVENTION: PROTEIN REMODELING METHODS AND PROTEINS/PEPTIDES PRODUCED BY THE
 ; FILE REFERENCE: 040853-01-5053
 ; CURRENT APPLICATION NUMBER: US/10/411,026
 ; FILE REFERENCE: 040853-01-5053
 ; CURRENT FILING DATE: 2003-04-09
 ; PRIOR APPLICATION NUMBER: US 60/328,523
 ; PRIOR FILING DATE: 2001-10-10
 ; PRIOR APPLICATION NUMBER: US 60/344,692
 ; PRIOR FILING DATE: 2001-10-19
 ; PRIOR APPLICATION NUMBER: US 60/387,292
 ; PRIOR FILING DATE: 2002-06-07
 ; PRIOR APPLICATION NUMBER: US 60/391,777
 ; PRIOR FILING DATE: 2002-06-25
 ; PRIOR APPLICATION NUMBER: US 60/396,594
 ; PRIOR FILING DATE: 2002-07-17
 ; PRIOR APPLICATION NUMBER: US 60/404,249
 ; PRIOR FILING DATE: 2002-08-16
 ; PRIOR APPLICATION NUMBER: US 60/407,527
 ; PRIOR FILING DATE: 2002-08-28
 ; NUMBER OF SEQ ID NOS: 75
 ; SOFTWARE: PatentIn version 3.2
 ; SEQ ID NO 10
 ; LENGTH: 462
 ; TYPE: PRT
 ; ORGANISM: Homo sapiens
 ; US-10-411-026-10

Query Match

31.2%; Score 725.5; DB 12; Length 462;
 Best Local Similarity 35.4%; Pred. No. 1.9e-53;
 Matches 151; Conservative 69; Mismatches 157; Indels 49; Gaps 11;

QY 5 LEEFVQNLREHREMEKSCFEEPREVEENTETKEEFMWQYVLDQCESNP-----CL 103
 DB 65 GHGCTCIDIGSPSCDRCSGMEGRFCQREVSFLNCSLDNGGTHYCLEVGNR-RSCSAPG 123
 DB 104 NGGSCCKDINSYECWCFPGFEGKNCELDVT---CNTRKRCQPCCKNSADNKVVCSTEG 160
 QY 124 YKLGDDLLQCHPAVKPCGRPWKMEKKRSHLKADTEDQEDQVDP-----168
 DB 161 YRLANQSCCEPAVFPFCGRVSVQTSKLTARAAYEPD-VQVYVPTAEITLIDNTIGSTQ 219
 QY 169 -----RLIDGKTRRGDSFWQVLLDSKKKLACGAVLIHPSWLTAAHOMDESKQLVR 222
 DB 220 SFNDFTRVVGEGDAKFGQFPQVY-LNGKVDAFCGGSIVNEKMTVTAHCVETGVXITIV 278
 QY 223 LGEYDLRRMEKMLDD-LKEVYVHPNYSKT---DNDAI.LHLAOPATLSQTIPICLP 279
 DB 279 AGSHNIEETETEKRNVTIRALIPHNNAINKINDALALDELDEPLVINSYVTPICIA 338
 QY 280 DSGLAERELNQAQETLVYTGWG--YHSSREKEAKRNRTVLFKIPVPHNECEVMSN 337
 DB 339 DKEYTNI.FLXKG--SGYVSGMARVPHKGRS-----ALVLQYLRVPLVDRAATCLRSTKF 389
 QY 338 MVEENMLCAGTLGRDACEGDSGSPWYASPHGTWFLVGLVSWGCGGLAHNGYVYTVS 397
 DB 390 TLYNNMFCAGFHEGGSDSCGDSGGFHVTEVGTSLTGLISWBECCAMKKGKGIYTVS 449
 QY 398 RYLDWI 403
 DB 450 RYVNM 455

DB 52 LEEFVQNLREHREMEKSCFEEPREVEENTETKEEFMWQYVLDQCESNP-----CL 103
 QY 65 GHGCTCIDIGSPSCDRCSGMEGRFCQREVSFLNCSLDNGGTHYCLEVGNR-RSCSAPG 123
 DB 104 NGGSCCKDINSYECWCFPGFEGKNCELDVT---CNTRKRCQPCCKNSADNKVVCSTEG 160
 QY 124 YKLGDDLLQCHPAVKPCGRPWKMEKKRSHLKADTEDQEDQVDP-----168
 DB 161 YRLANQSCCEPAVFPFCGRVSVQTSKLTARAAYEPD-VQVYVPTAEITLIDNTIGSTQ 219
 QY 169 -----RLIDGKTRRGDSFWQVLLDSKKKLACGAVLIHPSWLTAAHOMDESKQLVR 222
 DB 220 SFNDFTRVVGEGDAKFGQFPQVY-LNGKVDAFCGGSIVNEKMTVTAHCVETGVXITIV 278
 QY 223 LGEYDLRRMEKMLDD-LKEVYVHPNYSKT---DNDAI.LHLAOPATLSQTIPICLP 279
 DB 279 AGSHNIEETETEKRNVTIRALIPHNNAINKINDALALDELDEPLVINSYVTPICIA 338
 QY 280 DSGLAERELNQAQETLVYTGWG--YHSSREKEAKRNRTVLFKIPVPHNECEVMSN 337
 DB 339 DKEYTNI.FLXKG--SGYVSGMARVPHKGRS-----ALVLQYLRVPLVDRAATCLRSTKF 389
 QY 338 MVEENMLCAGTLGRDACEGDSGSPWYASPHGTWFLVGLVSWGCGGLAHNGYVYTVS 397
 DB 390 TLYNNMFCAGFHEGGSDSCGDSGGFHVTEVGTSLTGLISWBECCAMKKGKGIYTVS 449
 QY 398 RYLDWI 403
 DB 450 RYVNM 455

RESULT 62

US-10-410-962-10
 ; Sequence 10, Application US/10410962
 ; Publication No. US20040077836A1
 ; GENERAL INFORMATION:
 ; APPLICANT: Neose Technologies, Inc.
 ; APPLICANT: Defrees, Shawn
 ; APPLICANT: Zopf, David
 ; APPLICANT: Bayer, Robert
 ; APPLICANT: Hakes, David
 ; APPLICANT: Chen, Xi
 ; TITLE OF INVENTION: GRANULOCYTE COLONY STIMULATING FACTOR: REMODELING AND
 ; FILE REFERENCE: 040853-01-5054
 ; CURRENT APPLICATION NUMBER: US/10/410,962
 ; FILE REFERENCE: 040853-01-5054
 ; CURRENT FILING DATE: 2003-04-09
 ; PRIOR APPLICATION NUMBER: US 60/328,523
 ; PRIOR FILING DATE: 2001-10-10
 ; PRIOR APPLICATION NUMBER: US 60/344,692
 ; PRIOR FILING DATE: 2001-10-19
 ; PRIOR APPLICATION NUMBER: US 60/387,292
 ; PRIOR FILING DATE: 2002-06-07
 ; PRIOR APPLICATION NUMBER: US 60/391,777
 ; PRIOR FILING DATE: 2002-06-25
 ; PRIOR APPLICATION NUMBER: US 60/396,594
 ; PRIOR FILING DATE: 2002-07-17
 ; PRIOR APPLICATION NUMBER: US 60/404,249
 ; PRIOR FILING DATE: 2002-08-16
 ; PRIOR APPLICATION NUMBER: US 60/407,527
 ; PRIOR FILING DATE: 2002-08-28
 ; NUMBER OF SEQ ID NOS: 75
 ; SOFTWARE: PatentIn version 3.2
 ; SEQ ID NO 10
 ; LENGTH: 462
 ; TYPE: PRT
 ; ORGANISM: Homo sapiens
 ; US-10-410-962-10

Query Match

31.2%; Score 725.5; DB 16; Length 462;
 Best Local Similarity 35.4%; Pred. No. 1.9e-53;
 Matches 151; Conservative 69; Mismatches 157; Indels 49; Gaps 11;

```

QY 5 LEEHSHSLRECEIEICDPEEAKIIFONVDDTLAFWSKRDVDOCVLPLEHPASLCC 64
DB 52 LEEFVQGNLEBCEMEKCSFEEDREVFENKTEETFEKQYVDGDCESNP-----CL 103
QY 65 GHGTICIDIGSPDCDSGWRGFCOREVSLNCGCTHYCLEEVMR-RCSCAFG 123
DB 104 NGSCSKDDINSYECWCFEPFGKNCEDVLT---CNKGRCEQPCNKSADNKVYCSCTEG 160
QY 124 YKLGDLLQCHPAVPCGPRPKMEKKRSHLRDTEQEDQVDP-----168
DB 161 YRLAENQKSCBPAPVPCGRVSVSQTSLTRAFVFPD-VDYVNPTEAETILNDITQSTQ 219
QY 169 -----RLIDGKMTRRGDSFWQVVLNDSKKLACGAVLHPSVULTAHOMESKLLVR 222
DB 220 SFNDFTRVVGEEDAKPQGFPMQVY-LNKGVDAPFGSGSVNEKVIYLAHCVEGTGKITYV 278
QY 223 LGEYDLRRWEKWEELDLD-IKEVFVHPNYSKSTT--DNDIALHLAOPATLSQTIPICLP 279
DB 279 AGEHNIETETHTEQKRVITRAITPHNYMAINKYNDIALLEDEPLVINSYVTPICIA 338
QY 280 DSGIARELNQAGQETLYTGWG--YHSSEKAKARNRTFVNFKIPVPHNECSEVMNS 337
DB 339 DKEYTNIFLTKFG--SGYVSGMARVPHKGRS-----ALVLYRLVPLVDRAICLRSTKF 389
QY 338 MVSBNMLCAGILGDRQACGSDGSGPMVASFHGTWPLVGVSWGEGGILHNYGVYTKVS 397
DB 390 TIYNNMFCAGFHEGGRDSCQSDGSPHTEVEGTSPFLGILISWGBECAMKKGKITYTKS 449
QY 398 RYLDWI 403
DB 450 RYVWMT 455

RESULT 63
US-10-411-049-10
/ Sequence 10, Application US/10411049
/ Publication No. US20040082026A1
/ GENERAL INFORMATION:
/ APPLICANT: Neose Technologies, Inc.
/ APPLICANT: Deftrees, Shann
/ APPLICANT: Zopf, David
/ APPLICANT: Bayer, Robert
/ APPLICANT: Hakes, David
/ APPLICANT: Chen, Xi
/ TITLE OF INVENTION: INTERFERON ALPHA, REMODELING AND GLYCOCOMUTATION OF INTERFERON
/ TITLE OF INVENTION: ALPHA
/ FILE REFERENCE: 040853-01-5055
/ CURRENT APPLICATION NUMBER: US/10/411,049
/ PRIOR FILING DATE: 2003-04-09
/ PRIOR APPLICATION NUMBER: US 60/328,523
/ PRIOR FILING DATE: 2001-10-10
/ PRIOR APPLICATION NUMBER: US 60/344,692
/ PRIOR FILING DATE: 2001-10-19
/ PRIOR APPLICATION NUMBER: US 60/387,292
/ PRIOR FILING DATE: 2002-06-07
/ PRIOR APPLICATION NUMBER: US 60/391,777
/ PRIOR FILING DATE: 2002-06-25
/ PRIOR APPLICATION NUMBER: US 60/396,594
/ PRIOR FILING DATE: 2002-07-17
/ PRIOR APPLICATION NUMBER: US 60/404,249
/ PRIOR FILING DATE: 2002-08-16
/ PRIOR APPLICATION NUMBER: US 60/407,537
/ PRIOR FILING DATE: 2002-08-28
/ NUMBER OF SEQ ID NOS: 75
/ SOFTWARE: PatentIn version 3.2
/ SEQ ID NO 10
/ LENGTH: 462
/ TYPE: PRT
/ ORGANISM: Homo sapiens
US-10-411-049-10

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Query Match 31.2%; Score 725.5; DB 16; Length 462;
Best Local Similarity 35.4%; Pred. No. 1.9e-53;
Matches 151; Conservative 69; Mismatches 157; Indels 49; Gaps 11;

QY 5 LEEHSHSLRECEIEICDPEEAKIIFONVDDTLAFWSKRDVDOCVLPLEHPASLCC 64
DB 52 LEEFVQGNLEBCEMEKCSFEEDREVFENKTEETFEKQYVDGDCESNP-----CL 103
QY 65 GHGTICIDIGSPDCDSGWRGFCOREVSLNCGCTHYCLEEVMR-RCSCAFG 123
DB 104 NGSCSKDDINSYECWCFEPFGKNCEDVLT---CNKGRCEQPCNKSADNKVYCSCTEG 160
QY 124 YKLGDLLQCHPAVPCGPRPKMEKKRSHLRDTEQEDQVDP-----168
DB 161 YRLAENQKSCBPAPVPCGRVSVSQTSLTRAFVFPD-VDYVNPTEAETILNDITQSTQ 219
QY 169 -----RLIDGKMTRRGDSFWQVVLNDSKKLACGAVLHPSVULTAHOMESKLLVR 222
DB 220 SFNDFTRVVGEEDAKPQGFPMQVY-LNKGVDAPFGSGSVNEKVIYLAHCVEGTGKITYV 278
QY 223 LGEYDLRRWEKWEELDLD-IKEVFVHPNYSKSTT--DNDIALHLAOPATLSQTIPICLP 279
DB 279 AGEHNIETETHTEQKRVITRAITPHNYMAINKYNDIALLEDEPLVINSYVTPICIA 338
QY 280 DSGIARELNQAGQETLYTGWG--YHSSEKAKARNRTFVNFKIPVPHNECSEVMNS 337
DB 339 DKEYTNIFLTKFG--SGYVSGMARVPHKGRS-----ALVLYRLVPLVDRAICLRSTKF 389
QY 338 MVSBNMLCAGILGDRQACGSDGSGPMVASFHGTWPLVGVSWGEGGILHNYGVYTKVS 397
DB 390 TIYNNMFCAGFHEGGRDSCQSDGSPHTEVEGTSPFLGILISWGBECAMKKGKITYTKS 449
QY 398 RYLDWI 403
DB 450 RYVWMT 455

RESULT 64
US-10-406-031-31
/ Sequence 31, Application US/10406031
/ Publication No. US20040043017A1
/ GENERAL INFORMATION:
/ APPLICANT: Mascl, Paul Pantaleone
/ APPLICANT: De Jersey, John
/ APPLICANT: Lavin, Martin
/ TITLE OF INVENTION: PROTHROMBIN ACTIVATING PROTEIN
/ FILE REFERENCE: 15685-002001
/ CURRENT APPLICATION NUMBER: US/10/406,031
/ CURRENT FILING DATE: 2003-04-02
/ PRIOR APPLICATION NUMBER: AU 2003901033
/ PRIOR FILING DATE: 2003-03-07
/ PRIOR APPLICATION NUMBER: AU PS1483
/ PRIOR FILING DATE: 2002-04-03
/ NUMBER OF SEQ ID NOS: 51
/ SOFTWARE: FastSeq for Windows Version 4.0
/ SEQ ID NO 31
/ LENGTH: 376
/ TYPE: PRT
/ ORGANISM: Tropidochis carinatus
US-10-406-031-31

Query Match 31.2%; Score 724; DB 12; Length 376;
Best Local Similarity 35.7%; Pred. No. 1.9e-53;
Matches 148; Conservative 73; Mismatches 136; Indels 58; Gaps 9;

QY 1 ANSFLERHSLECEIEICDPEEAKIIFONVDDTLAFWSKRDVDOCVLPLEHPCA 60
DB 1 SNSLFEIRPGRNIRECEIEKCSKEARVPEDEKTEFFNNVYVDDQSSNP-----54
QY 61 SLCCGHTCIDIGSPDCDSGWRGFCOREVSLNCGCTHYCLEEVMRRCSC 120
DB 55 --CHYGTCKDIGSYCTCLPLNYSKRCER-VLYOSCVNRCNMFPCRVOSFTQSC 111

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QY 121 APGYKLDGDLQCHPAVKEFGGRPMKMEKESHKRTDEQEDQYDPRLLDGMKTRRD 180
Db 112 AERYRLDVSHSCVAEGDFSCGRNTRKRN-----TAYGNDCKLGE 152
QY 181 SPQWVLLDSKKKLAAGAVLIHPSWVLTAAHCMSCKKLVLRLGEYDLRMEKWELELD1 240
Db 153 CPWQAVLINKEGVPCGGITLSPITHVLTAAHCNQTNSV-----KETRRL-----LSV 200
QY 241 KEVPH-----ENV-----SKSTNDIALIHLAQAATLSQTYPTCLPDSGLAREL 288
Db 201 DKIVHTKEFVPMYVYVYHQNDRAVADYDIALIRKMTPLQFSEKVPACLTPTADPA-NEV 259
QY 289 NQAGEFTLVNMGVSHSRKAKRNFTVNLFXLPVPHNECEVSNMVSNNLQAGI 348
Db 260 LMKODSGVSGFG-----RIQKQPTSNLKVITYPYDRTCTMSDPRITQMPQAGY 314
QY 349 LGDRDQACDGSQGPVWASFHGTWFLVGLVSMGEGGLLHNVGYTKVSRYLDMT 403
Db 315 DTLPRDQACDGSQGPVWASFHGTWFLVGLVSMGEGGLLHNVGYTKVSRYLDMT 369

RESULT 65

US-10-382-248-36
; Sequence 36, Application US/10382248
; Publication No. US20040058347A1
; GENERAL INFORMATION:
; APPLICANT: Alsbetook, et al.
; TITLE OF INVENTION: NOVEL PROTEINS AND NUCLEIC ACIDS ENCODING SAME
; FILE REFERENCE: 21402-568C
; CURRENT APPLICATION NUMBER: US/10/382,248
; PRIOR FILING DATE: 2003-03-05
; PRIOR APPLICATION NUMBER: 60/366,928
; PRIOR FILING DATE: 2002-03-22
; PRIOR APPLICATION NUMBER: 60/361,974
; PRIOR FILING DATE: 2002-03-06
; PRIOR APPLICATION NUMBER: 60/365,477
; PRIOR FILING DATE: 2002-03-19
; PRIOR APPLICATION NUMBER: 60/401,661
; PRIOR FILING DATE: 2002-08-06
; NUMBER OF SEQ ID NOS: 82
; SOFTWARE: CuiSeqLast version 0.1
; SEQ ID NO 36
; LENGTH: 419
; TYPE: PRT
; ORGANISM: Homo sapiens
US-10-382-248-36

Query Match 28.9%; Score 671.5; DB 12; Length 419;
Best Local Similarity 34.4%; Pred. No. 6.8e-49;
Matches 145; Conservative 72; Mismatches 125; Indels 79; Gaps 9;

QY 1 ANSTLEELHSSLEBCEIEICPEBAKTIQNDPDLAFMSKNDGQCLVPLBHPQA 60
Db 61 ANATLEELRPGSLERCKEBCQCSPEARIEFDMEKTLTWSYSDQD-----AS 112
QY 61 SLCCGHTCIDIGISFSCDQSGMGGRFCQRFVPSLNCSDNGACTHYCLEBVMGRCSG 120
Db 113 SPCCMGSCCKDQLOSTYTCCLPAFGRNCE----- 142
QY 121 APGYKLDGDLQCHPAVKEFGGRPMKMEKESHKRTDEQEDQYDPRLLDGMKTRRD 180
Db 143 -----TLEYPCGK-IPLEKRNA-----SKQGGIVGKAVCPKBS 176
QY 181 SPQWVLLDSKKKLAAGAVLIHPSWVLTAAHCMSCKKLVLRLGEYDLRMEKWELELD 237
Db 177 CPWQAVLINKEGVPCGGITLSPITHVLTAAHCNQTNSV-----KETRRL-----LSV 200
QY 238 LDIKEVPHNYSKSTTNDIALIHLAQAATLSQTYPTCLPDSGLARELNMQAGETIV 297
Db 236 RRVQAVLIIPSTVPGTTHDIALIRLHQFVVLTDHVPLCLPRTFSERTLAFA-RSLIV 294
QY 298 TGMGYHSSREKEKRNRTFVNLFXLPVPHNECEVSNMVSNNLQAGIIGDR 352

Db 295 SGWGLLDGRGATA-----LELMVINVERLMTQDCLQOSRKVGSFNITHEMCAQISDS 349
QY 353 OACSGSGGPVWASFHGTWFLVGLVSMGEGGLLHNVGYTKVSRYLDMIGHIRDKEA 412
Db 350 KQSCGSGSGGPVWASFHGTWFLVGLVSMGEGGLLHNVGYTKVSRYLDMIGHIRDKEA 409
QY 413 P 413
Db 410 P 410

RESULT 66

US-09-951-121A-1
; Sequence 1, Application US/09951121A
; Publication No. US20030104978A1
; GENERAL INFORMATION:
; APPLICANT: Persson, Egon
; APPLICANT: Olsen, Ole Hvilsted
; TITLE OF INVENTION: Human Coagulation Factor VII Variants
; FILE REFERENCE: 6224.200-US
; CURRENT APPLICATION NUMBER: US/09/951,121A
; PRIOR FILING DATE: 2001-09-13
; PRIOR APPLICATION NUMBER: PA 2000 01361
; PRIOR FILING DATE: 2000-09-13
; PRIOR APPLICATION NUMBER: 60/236,455
; PRIOR FILING DATE: 2000-09-29
; NUMBER OF SEQ ID NOS: 17
; SOFTWARE: FastSeq for Windows Version 4.0
; SEQ ID NO 1
; LENGTH: 426
; TYPE: PRT
; ORGANISM: Native Human Coagulation Factor VII
US-09-951-121A-1

Query Match 28.4%; Score 661; DB 10; Length 426;
Best Local Similarity 36.2%; Pred. No. 5.5e-48;
Matches 140; Conservative 71; Mismatches 140; Indels 36; Gaps 10;

QY 37 TLAFMSKRVYDQCLVPLBHPQASLCQHGTCIDIGISFSCDQSGMGGRFCQ-RVSVF 95
Db 57 TKLFMTSYSDQDQ-----ASSPCQNGSGCKDQLOSTYTCCLPAFGRNCTHKKDQ 108
QY 96 LNCGLDNGCTHYCIEFVGRNR-CSCARPYKLDGDLQCHPAVKEFGGRPMKMEKESH 154
Db 109 LICVNEGGCEQYCSDHGTGRSCRCHEBSILMDGVSCTPYEYCGK-IPLEKRNA- 166
QY 155 LKRDEDEQYDPRLLDGMKTRGDSPMQVLLDSKKKLAAGAVLIHPSWVLTAAHCMD 214
Db 167 -----SKQGGIVGKAVCPKBS-----CGTLINTVWVSAACFD 216
QY 215 ESK-----KLVLRLGEYDLRMEKWELELDIKEVPHNYSKSTTNDIALIHLAQAATLSQ 271
Db 217 KIKMWRVLIHPSWVLTAAHCMSCKKLVLRLGEYDLRMEKWELELDIKEVPHNYSKSTTNDIALIHLAQAATLSQ 276
QY 272 TIVPTCLPDSGLARELNMQAGETIVNMGVSHSRKAKRNFTVNLFXLPVPHNECEV 331
Db 277 HVPLCLPDSGLARELNMQAGETIVNMGVSHSRKAKRNFTVNLFXLPVPHNECEV 330
QY 332 SEVW-----SNMVSNNLQAGIIGDRDQACDGSQGPVWASFHGTWFLVGLVSMGEGGL 366
Db 331 LQOSKRGDSFNITHEMCAQISDSKQSGGPHATYRGITWLTGLIVSMGEGCAT 390
QY 387 LHHGVYTKVSRYLDMIGHIRDKEA 413
Db 391 VGHREGVYTRVSQYLEWLCIMKSSPRP 417

RESULT 67
US-09-848-107-1
; Sequence 1, Application US/09848107
; Publication No. US20030170863A1
; GENERAL INFORMATION:
; APPLICANT: Persson, Egon


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RESULT 68
US-10-295-682-1
; Sequence 1, Application US/10295682
; Publication NO. US20030100740A1
; GENERAL INFORMATION:
; APPLICANT: Persson, Egon
; APPLICANT: Olsson, Ole Hyvsted
; TITLE OF INVENTION: Human Coagulation Factor VII Variant
; FILE REFERENCE: 6824.200-US
; CURRENT APPLICATION NUMBER: US/10/295,682
; CURRENT FILING DATE: 2002-11-15
; PRIOR APPLICATION NUMBER: PA 2000 01361
; PRIOR FILING DATE: 2000-09-13
; PRIOR APPLICATION NUMBER: 60/256,455
; PRIOR FILING DATE: 2000-09-29
; NUMBER OF SEQ ID NOS: 17
; SOFTWARE: FastSeq for Windows Version 4.0
; SEQ ID NO: 1
; LENGTH: 426

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RESULT 69
US-10-038-854-6
/ Sequence 6, Application US/10038954
/ Publication No. US20040022781A1
/ GENERAL INFORMATION:
/ APPLICANT: Spytek, Kimberly A
/ APPLICANT: Li, Li
/ APPLICANT: Wolenc, Adam R
/ APPLICANT: Vernett, Corinne
/ APPLICANT: Bisen, Andrew J
/ APPLICANT: Liu, Xiaohong
/ APPLICANT: Maiyankar, Uziel M
/ APPLICANT: Shinkovets, Richard A
/ APPLICANT: Tcherney, Velizar
/ APPLICANT: Spaderna, Steven K
/ APPLICANT: German, Linda
/ APPLICANT: Kerkuda, Ramesh
/ APPLICANT: Patturajan, Meera
/ APPLICANT: Gusev, Vladimir Y
/ APPLICANT: Gangolli, Esna A
/ APPLICANT: Guo, Xiaojia S
/ APPLICANT: Shenoy, Sureeh G
/ APPLICANT: Kasteili, Lucia
/ APPLICANT: Casman, Stacie J
/ APPLICANT: Boldog, Ferenc
/ APPLICANT: Burgess, Catherine E
/ APPLICANT: Edinger, Shlomit R
/ APPLICANT: Ellerman, Karen
/ APPLICANT: Gunther, Erik
/ APPLICANT: Smitson, Glenda
/ APPLICANT: Mallet, Isabelle
/ APPLICANT: Madoussali, John R
/ TITLE OF INVENTION: Proteins and Nucleic Acids Encoding Same
/ FILE REFERENCE: 21402-230
/ CURRENT FILING DATE: 2003-01-22

```

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/ PRIOR APPLICATION NUMBER: 60/258,928
/ PRIOR FILING DATE: 2000-12-29
/ PRIOR APPLICATION NUMBER: 60/259,415
/ PRIOR FILING DATE: 2001-01-02
/ PRIOR APPLICATION NUMBER: 60/259,785
/ PRIOR FILING DATE: 2001-01-04
/ PRIOR APPLICATION NUMBER: 60/269,814
/ PRIOR FILING DATE: 2001-02-20
/ PRIOR APPLICATION NUMBER: 60/279,832
/ PRIOR FILING DATE: 2001-03-29
/ PRIOR APPLICATION NUMBER: 60/279,833
/ PRIOR FILING DATE: 2001-03-29
/ PRIOR APPLICATION NUMBER: 60/279,863
/ PRIOR FILING DATE: 2001-03-29
/ PRIOR APPLICATION NUMBER: 60/283,889
/ PRIOR FILING DATE: 2001-04-13
/ PRIOR APPLICATION NUMBER: 60/284,447
/ PRIOR FILING DATE: 2001-04-18
/ PRIOR APPLICATION NUMBER: 60/286,683
/ PRIOR FILING DATE: 2001-04-25
/ Remaining Prior Application data removed - See file wrapper or PALM.
/ NUMBER OF SEQ ID NOS: 411
/ SOFTWARE: PatentIn Ver. 2.1
/ SEQ ID NO 6
/ LENGTH: 394
/ TYPE: PRT
/ ORGANISM: Homo sapiens
US-10-038-854-6

Query Match      27.2%; Score 632.5; DB 16; Length 394;
Best Local Similarity 32.6%; Pred. No. 1.4e-45;
Matches 133; Conservative 64; Mismatches 130; Indels 81; Gaps 9;

QY 5 LELRHSSLEKECEIEICDFEAKKIFQNVDDTLAFMSKAVDQCVLPLEHPCASLCC 64
DB 52 LEEFVQSWLEKECEIEICDFEAKKIFQNVDDTLAFMSKAVDQCVLPLEHPCASLCC 103
QY 65 GAGTCIDIGSFSCDGRSGMEGRFCOREVFLNCS-----LDNGGCTHYCLEBYGMRBCS 119
DB 104 NGGSCDDIINSYECWCPFGEGKNCLELDVYNSTAEITLDN----- 146
QY 120 CAGYKGLADLLQCHPAVK-FPCGRPKMKMEKKSRLKRTEDQEDQV-----DPRLI 171
DB 147 -----ITOSTGTFDFT--RVVGGEDAKRG 169
QY 180 DSPWQVLLDSKKKLACGAVLHPGWLTAAGCMDSKTLVRLGEYDLRMEKMEILD 239
DB 170 QPFWQV-LNGKVDAPFGGSIVNEKMTVTAACVEYGVKITYVAGHNIEETHTDOKN 228
QY 240 IKEVFNHPYKSTT--DNDIALHQAQATLSQTVPLCLPDSGLARELNQAGETLV 297
DB 229 VIRIIPHNVAALINKYNDIALLEDEPLVNSYVPLCIDKREYTNIFLKG--SGYV 286
QY 298 TGGG--YHSSEKAKKRTFVNLTKIPVPRHEGSEVMASVSENNLCAGLSGRDRA 355
DB 287 SGGRVFNHKS-----ALVLYQLRVPVLDRAVTCILRSKTFITNNPAGHREGGRDS 339
QY 356 CEGDSSGPPVASFPGTWFLVGLVSGEGGLAHNYGYTVTSRYLDWI 403
DB 340 CGDSSGPHTEVEGTSFLIGIISWEGCAMKKGKGYIKVSRVYNNI 387

RESULT 70
US-10-406-031-30
/ Sequence 30, Application US/10406031
/ Publication No. US20040043017A1
/ GENERAL INFORMATION:
/ APPLICANT: Mascl, Paul Pantaleone
/ APPLICANT: De Jersey, John
/ APPLICANT: Lavin, Martin
/ TITLE OF INVENTION: PROTHROMBIN ACTIVATING PROTEIN
/ FILE REFERENCE: 15685-002001
/ CURRENT APPLICATION NUMBER: US/10/406,031
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/ CURRENT FILING DATE: 2003-04-02
/ PRIOR APPLICATION NUMBER: AU 2003901033
/ PRIOR FILING DATE: 2003-03-07
/ PRIOR APPLICATION NUMBER: AU PS1483
/ PRIOR FILING DATE: 2002-04-03
/ NUMBER OF SEQ ID NOS: 51
/ SOFTWARE: FastSeq for Windows Version 4.0
/ SEQ ID NO 30
/ LENGTH: 421
/ TYPE: PRT
/ ORGANISM: Artificial Sequence
/ FEATURE:
/ OTHER INFORMATION: Consensus sequence
US-10-406-031-30

Query Match      27.2%; Score 631; DB 12; Length 421;
Best Local Similarity 38.0%; Pred. No. 2e-45;
Matches 158; Conservative 72; Mismatches 122; Indels 64; Gaps 25;

QY 2 NSFLERHSSLEKECEIEICDFEAKKIFQNVDDTLAFMSKAVDQCVLPLEHPCAS 61
DB 41 NSLFEPR-GNIKECEIEICDFEAKKIFQNVDDTLAFMSKAVDQCVLPLEHPCAS 90
QY 62 LCCGCTCIDIGSFSCDGRSGMEGRFCOREVFLNCSLDNGGCTHYCLEBYGMRBCSA 121
DB 91 -CHYRGTCKDIGSYTCTCL--YEGKNC--EVLKSCRVDSNEMHPC--KVQNDQSCSA 143
QY 122 PGYKGLADLLQCHPAVK-FPCGRPKMKMEKKSRLKRTEDQEDQV-----DPRLI 171
DB 144 E-YLSDG---HSCVAGSCGRNTR-KNREASLDPPQSGMNTLKKSDNPSPIRLV 197
QY 172 DGMTRGSDSPWQVLLDSKKKLACGAVLHPGWLTAAGCMDSKTLVRLGEYDLRME 231
DB 198 NGMDCKLBCPMQAVL---DEKVFSGTILSPYVLAHCINQF-KISVYGHIDISRK 253
QY 232 EKEMLDIDIKVFYH---EYVSKSTNDIALHQAQATLSQTVPLCLPDSGLAREL 288
DB 254 ETL---LSYDQIKYHKKVPPYP-DYDYDIALIQMTKIPQSEBNVPCLEPLADPANOYL 309
QY 289 NQAGETLVAGVHSSREKAKRNTFVNLTKIPVPRHEGSEVMASVSENNLCAG 347
DB 310 MKQ-DPGIYSGF-----RIPSNLTKVVPVYDRBTC--MSSPIRP-MFCAG 353
QY 348 ILDRQDACEGDSGPPVASFPGTWFLVGLVSGEGGLAHNYGYTVTSRYLDWI 403
DB 354 -YDLPDCAQDGGSGPHTAYRDPHTIG-ISMWEGCA-KGKGYTVTSKFLPMI 406

RESULT 71
US-10-406-031-28
/ GENERAL INFORMATION:
/ APPLICANT: Mascl, Paul Pantaleone
/ APPLICANT: De Jersey, John
/ APPLICANT: Lavin, Martin
/ TITLE OF INVENTION: PROTHROMBIN ACTIVATING PROTEIN
/ FILE REFERENCE: 15685-002001
/ CURRENT APPLICATION NUMBER: US/10/406,031
/ PRIOR FILING DATE: 2003-04-02
/ PRIOR APPLICATION NUMBER: AU 2003901033
/ PRIOR FILING DATE: 2003-03-07
/ PRIOR APPLICATION NUMBER: AU PS1483
/ PRIOR FILING DATE: 2002-04-03
/ NUMBER OF SEQ ID NOS: 51
/ SOFTWARE: FastSeq for Windows Version 4.0
/ OTHER INFORMATION: Xaa = any amino acid
/ FEATURE:
/ NAME/KEY: VARIANT
/ LOCATION: 41, 50, 79, 114, 154, 177, 255, 272, 290
/ OTHER INFORMATION: Xaa = small amino acid residue
/ NAME/KEY: VARIANT
/ LOCATION: 45, 48, 70, 124, 126, 197, 210, 227, 258, 261, 312, 314,
/ LOCATION: 347, 365, 378, 419, 423, 437, 441, 451
```

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OTHER INFORMATION: Xaa = hydrophobic amino acid residue
FEATURE:
NAME/KEY: VARIANT
LOCATION: 49, 61, 434
OTHER INFORMATION: Xaa = basic amino acid residue
FEATURE:
NAME/KEY: VARIANT
LOCATION: 72, 229-230, 256
OTHER INFORMATION: Xaa = charged amino acid residue
FEATURE:
NAME/KEY: VARIANT
LOCATION: 146.
OTHER INFORMATION: Xaa = acidic amino acid residue
FEATURE:
NAME/KEY: VARIANT
LOCATION: 193.
OTHER INFORMATION: Xaa = neutral/polar amino acid residue
FEATURE:
NAME/KEY: VARIANT
LOCATION: 292-294, 297-299, 302...
OTHER INFORMATION: Xaa = independently absent or selected from
OTHER INFORMATION: any amino acid residue
FEATURE:
NAME/KEY: VARIANT
LOCATION: 295, 301
OTHER INFORMATION: Xaa = independently absent or selected from
FEATURE:
NAME/KEY: VARIANT
LOCATION: 296, 300, 303
OTHER INFORMATION: Xaa = independently absent or selected from
OTHER INFORMATION: hydrophobic amino acid residues
FEATURE:
NAME/KEY: VARIANT
LOCATION: 304
OTHER INFORMATION: Xaa = absent or a small amino acid residue
FEATURE:
NAME/KEY: VARIANT
LOCATION: 456
OTHER INFORMATION: Xaa = Z = absent or a peptide of from 1-20
FEATURE:
OTHER INFORMATION: amino acids
OTHER INFORMATION: Synthetically generated peptide
US-10-406-031-28

Query Match      26.3%; Score 611.5; DB 12; Length 456;
Best Local Similarity 32.6%; Pred. No. 1e-43;
Matches 138; Conservative 52; Mismatches 196; Indels 37; Gaps 8;
```

```
QY 341 ENMLCAGILIGDROACBEGSGGPMVASFHGTWFLVGLVSGGCGILLNRYGVTKVSRIL 400
DB 386 XXMFCAGYDTLTXDACCGDSGGPHITAYVDHFTXGLXSGBCAXXGXGXKXSF 445
QY 401 DMI 403
DB 446 XMI 448
```

```
RESULT 72
US-10-020-141-8
; Sequence 8, Application US/10020141
; Publication No. US20030092013A1
; GENERAL INFORMATION:
; APPLICANT: McCarthy, Jeanette
; APPLICANT: Ableson, Allen
; TITLE OF INVENTION: DIAGNOSIS AND TREATMENT OF VASCULAR DISEASE
; FILE REFERENCE: NMI-002
; CURRENT APPLICATION NUMBER: US/10/020,141
; PRIOR FILING DATE: 2001-12-14
; PRIOR APPLICATION NUMBER: US 60/313,097
; PRIOR FILING DATE: 2001-08-16
; PRIOR APPLICATION NUMBER: US 60/327,485
; NUMBER OF SEQ ID NOS: 21
; SOFTWARE: FastSeq for Windows Version 4.0
; SEQ ID NO 8
; LENGTH: 622
; TYPE: RRT
; ORGANISM: Homo sapiens
US-10-020-141-8
```

```
Query Match      24.2%; Score 562.5; DB 14; Length 622;
Best Local Similarity 29.1%; Pred. No. 2.3e-39;
Matches 169; Conservative 62; Mismatches 161; Indels 189; Gaps 24;

QY 1 ANSFLELRHSIERECIEICDFEAKETFOVVDPTLAFMSKHAVDGOCLVPLEHRCAS 60
DB 44 ANTFLEVRKGNIERECIEICDFEAKETFOVVDPTLAFMSKHAVDGOCLVPLEHRCAS 102
QY 61 SLCCGHTCIDIGS-----FSGD-----CR 81
DB 103 ---CLGNCAGELGTYNRYGHVNTTRSGIECOLMRSRYPHKPEINSTTHPGADLOENFCN 159
QY 82 ---SGWGRFC-----QREVSFLN-----CSLDNGG 104
DB 160 PDSSTGPMCTTDDPYVRQECSTFVCGDQVTVAMTRSGSSVNLSPLEQVPRDQ 219
QY 105 -----CTH-----YCL-----EYGRRCSCA 121
DB 220 QYGRLAVTTHGRLCLAMASQAALSKHODFNSAVOLVENFCNPDGDEGVM---CY 275
QY 122 PGYKLGD---DLQCPAV-----KFP 140
DB 276 VAGKRGDPGYCDLNTCEAVNEETGGDLDEDSRAIEGRATSTSYQTFNPTPGSGEAD 335
QY 141 CG-REPKMEKKSHUKRTEDEDOVDPRLLDGRKTRGDSPOVVL--DSKKKLAGA 198
DB 336 CGLRP--LFEKSLDEKTERELLESYLDGRIYGSDAEIGMSPMQVWLFKPSFOELGCA 393
QY 199 VLIHPSVYLTAQCM-----DES---KKLAVRAGEVLRREK--WELDDIVEVPHVNY 249
DB 394 SLISDRVWLTAAICLLYPPWDKNFTENDLLVRIGKSRTERENIEKISMLEKITYHERY 453
QY 250 S-KSTTNDIALLHLAQPATLSOTVPICLPDSGLAEELIAQOETLYTGMG-YHSRE 307
DB 454 INRENLDIDILMLLKKPVAFSDYIHPVCLPDDETA--ASLLAAGVKKRVGMNCKETWT 512
QY 308 KKAENKTFVINFILKIPVPHNEGSEVNSNNVSENNLCAGIL---GRDQACGDSGGPM 364
DB 513 ANVKGQPSVLAQVNVNPIVERPVCKDSTRIRITDNNFCAGYKPRDEGRGACGDSGGPF 572
QY 365 V--ASPHGTVLGLVSGGCGILLNRYGVTKVSRIL 403
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Db 573 VMKSPFNRMKYMGIIVSMGBCDRODKYGYTHVFLKMT 613

RESULT 73

US-10-017-631-2
 ; Sequence 2, Application US/10017631
 ; Publication No. US2003009957A1
 ; GENERAL INFORMATION:
 ; APPLICANT: McCarthy, Jeanette
 ; TITLE OF INVENTION: DIAGNOSIS AND TREATMENT OF VASCULAR DISEASE
 ; FILE REFERENCE: MMI-006
 ; CURRENT APPLICATION NUMBER: US/10/017, 631
 ; PRIOR FILING DATE: 2001-12-14
 ; PRIOR FILING DATE: 2001-09-28
 ; NUMBER OF SEQ ID NOS: 4
 ; SOFTWARE: PatentIn Ver. 2.0
 ; SEQ ID NO 2
 ; LENGTH: 622
 ; TYPE: PRT
 ; ORGANISM: Homo sapiens
 US-10-017-631-2

Query Match 24.2%; Score 562.5; DB 14; Length 622;

Best Local Similarity 29.1%; Pred. No. 2.3e-39;

Matches 169; Conservative 62; Mismatches 161; Indels 189; Gaps 24;

QY 1 ANSFLEIRHSSIERECIEICDPEAKEIFQVNDTLAFMSKAVDQCLVPLEHPCA 60

Db 44 ANTFLEVRKGNLERECVEETCSYEAFALBSTATDVFAKTA CETART-PRDKLAA 102

QY 61 SLCCGHGTCIDIGS-----FSCD-----CR- 81

Db 103 ---CLENCACAGLTGVRGHVNTIRSGIEQLMRSRYPHKEINSTTHPGADLOENFCRN 159

QY 82 --SGWGRFC-----QREVSFLN-----CSLDNGG 104

Db 160 PDSSTTGWCTTDDPTVRROCSIPVCGQDQVTVANTPRSGSSVNLSPLEQCPDRGQ 219

QY 105 -----CTH-----YCL-----EYVGRRCGA 121

Db 220 QYQRLAVTTGGLPCLAMASQAQKALSKHODFNSAVQVLENPCNPDGDEGVW---CY 275

QY 122 PGYKGD---DLQCHPAV-----KFP 140

Db 276 VAKRGDFGYCDLNYCEAVEBEETGDGLDSDRALEGRTATSEYQTFENPRTFGSGEAD 335

QY 141 CG-RPWKMEKESHLKRDTEDEQDQVDPRLIDGKMTTRGDSPMQVYL--DSKKLACGA 198

Db 336 CGLRP--LFEKKSLEDEKTERELLESYIDGRIVSGDAEIGMSPMQVWLFKSPQELLCGA 393

QY 199 VLIHPSVULTAHC-----DES---KTLVRLGEYDLRMEK--WEIIDLKEVFNHNY 249

Db 394 SLISDRWVLTAAHCLIPVMDNFTENDLVRIKHSRFRRENIKISMLEKTYIHPRY 453

QY 250 S-KSTTNDIALHLAOPATLSQTVIPICLPDGLARELNOAGETLYTNGW--YHSSRE 307

Db 454 NWRENDLIDIALMLKCKPVAFSDYIHPVCLPDRETA-ASLLDAGYKGRVYGMNLEKWT 512

QY 308 KEAKRRTFVNFILKIPVPHNECSFVSNVSNMLCAGIL--GRODACGDSGGM 364

Db 513 ANYGKQPSVLTQVNLPIVERPVCDSTRIRITDNMFCAGYEPDEKRGACGDSGGRF 572

QY 365 V-ASPHGTWLVGLVSMGCGGLHANTGYTKSYRLMI 403

Db 573 VMKSPFNRMKYMGIIVSMGBCDRODKYGYTHVFLKMT 613

RESULT 74

US-10-214-932-116
 ; Sequence 116, Application US/10214932
 ; Publication No. US20030100707A1

GENERAL INFORMATION:

APPLICANT: HWANG, Inhwan
 APPLICANT: KIM, Dae Heon
 APPLICANT: LEE, Yong Jik
 TITLE OF INVENTION: SYSTEM FOR DETECTING PROTEASE
 FILE REFERENCE: APR02/US
 CURRENT APPLICATION NUMBER: US/10/214, 932
 CURRENT FILING DATE: 2002-08-08
 NUMBER OF SEQ ID NOS: 133
 SOFTWARE: PatentIn version 3.1
 SEQ ID NO 116
 LENGTH: 622
 TYPE: PRT
 ORGANISM: Homo sapiens
 US-10-214-932-116

Query Match 24.2%; Score 562.5; DB 14; Length 622;

Best Local Similarity 29.1%; Pred. No. 2.3e-39;

Matches 169; Conservative 62; Mismatches 161; Indels 189; Gaps 24;

QY 1 ANSFLEIRHSSIERECIEICDPEAKEIFQVNDTLAFMSKAVDQCLVPLEHPCA 60

Db 44 ANTFLEVRKGNLERECVEETCSYEAFALBSTATDVFAKTA CETART-PRDKLAA 102

QY 61 SLCCGHGTCIDIGS-----FSCD-----CR- 81

Db 103 ---CLENCACAGLTGVRGHVNTIRSGIEQLMRSRYPHKEINSTTHPGADLOENFCRN 159

QY 82 --SGWGRFC-----QREVSFLN-----CSLDNGG 104

Db 160 PDSSTTGWCTTDDPTVRROCSIPVCGQDQVTVANTPRSGSSVNLSPLEQCPDRGQ 219

QY 105 -----CTH-----YCL-----EYVGRRCGA 121

Db 220 QYQRLAVTTGGLPCLAMASQAQKALSKHODFNSAVQVLENPCNPDGDEGVW---CY 275

QY 122 PGYKGD---DLQCHPAV-----KFP 140

Db 276 VAKRGDFGYCDLNYCEAVEBEETGDGLDSDRALEGRTATSEYQTFENPRTFGSGEAD 335

QY 141 CG-RPWKMEKESHLKRDTEDEQDQVDPRLIDGKMTTRGDSPMQVYL--DSKKLACGA 198

Db 336 CGLRP--LFEKKSLEDEKTERELLESYIDGRIVSGDAEIGMSPMQVWLFKSPQELLCGA 393

QY 199 VLIHPSVULTAHC-----DES---KTLVRLGEYDLRMEK--WEIIDLKEVFNHNY 249

Db 394 SLISDRWVLTAAHCLIPVMDNFTENDLVRIKHSRFRRENIKISMLEKTYIHPRY 453

QY 250 S-KSTTNDIALHLAOPATLSQTVIPICLPDGLARELNOAGETLYTNGW--YHSSRE 307

Db 454 NWRENDLIDIALMLKCKPVAFSDYIHPVCLPDRETA-ASLLDAGYKGRVYGMNLEKWT 512

QY 308 KEAKRRTFVNFILKIPVPHNECSFVSNVSNMLCAGIL--GRODACGDSGGM 364

Db 513 ANYGKQPSVLTQVNLPIVERPVCDSTRIRITDNMFCAGYEPDEKRGACGDSGGRF 572

QY 365 V-ASPHGTWLVGLVSMGCGGLHANTGYTKSYRLMI 403

Db 573 VMKSPFNRMKYMGIIVSMGBCDRODKYGYTHVFLKMT 613

RESULT 75

US-10-172-712-29
 ; Sequence 29, Application US/10172712
 ; Publication No. US20030125232A1
 ; GENERAL INFORMATION:
 ; APPLICANT: GRITFIN, JOHN H.
 ; APPLICANT: GALE, ANDREW J.
 ; APPLICANT: GATZOFF, ELIZABETH D.
 ; APPLICANT: PELLEDGER, JEAN-LUC
 ; TITLE OF INVENTION: STABILIZED PROTEINS WITH ENGINEERED DISULFIDE BONDS
 ; FILE REFERENCE: 4198-4001US1
 ; CURRENT APPLICATION NUMBER: US/10/172, 712

CURRENT FILING DATE: 2002-09-30
 PRIOR APPLICATION NUMBER: 60/298,578
 PRIOR FILING DATE: 2001-06-14
 NUMBER OF SEQ ID NOS: 32
 SOFTWARE: Patent Ver. 2.1
 SEQ ID NO 29
 LENGTH: 622
 TYPE: PRT
 ORGANISM: Homo sapiens
 US-10-172-712-29

Query Match 24.2%; Score 562.5; DB 14; Length 622;
 Best Local Similarity 29.1%; Pred. No. 2,36-39;
 Matches 169; Conservative 62; Mismatches 161; Indels 189; Gaps 24;

QY 1 ANSFLEELHSSLEEECEIEI CDFEAKEIFQNVDDTLAFMSKRVHDQCLVPLHPQA 60
 DB 44 ANTFLEEVKGNLRECEVEETCSYEAFALSTADYVMAKYACTART-PRDKLAA 102
 QY 61 SLCCGHTCIDIGS-----PSCD-----CR- 81
 DB 103 ---CLNGCABGLGNYRGVNTNRSGIBQUMRSYEPKPEINSTTHPGADLQENFCAN 159
 QY 82 --SGMEGRFC-----CREVSFLN-----CSLDNG 104
 DB 160 PDSSTTGWCYTTDPYVRQECSPVCGQDDQYVAMTPRSGSVNLSPLEQCVPDRQ 219
 QY 105 -----CTH-----YCL-----EYVGRRCQA 121
 DB 220 QYQRLAVTTHGIPCLAMASAKAISKHQDFNSAVLVENFCRNPDEDEGVW---CY 275
 QY 122 PGYVLDG---DLQCHPAV-----KFP 140
 DB 276 VAGKPGDFGCDLNYCEANVEETGCGLDSDRAIBKRTATSEYTFPNTRTSGSEAD 335
 QY 141 CG-RPWAKMEKRSKHLKEDTDEQDQVDPRLIDGKMRKRSQSPQVLL-DSKKLACGA 198
 DB 336 GGLRP--LFEKSLDEKTERLLESYIDGRIVESGDAEIGSPMQVMLFRKSPQELICGA 393
 QY 199 VLIHPSVLTAAHCH---DES---KLIYVLSGYDLRNER-WELDDIKYVFAPNY 249
 DB 394 SLISDRVLTAAHCLLPPWDKNTENDLVIGHSTRENTIKISMEEKYIHPRI 453
 QY 250 S-KSTNDIALILHAAOPATLSCTIVPICPDSGLARELNQAGETLVWG--YHSRE 307
 DB 454 NWRENLDRLALMLAKKPAVPSYIHPVCLPRETH-ASLLQGYGRYTGKMLKXTW 512
 QY 308 KEAKRNTFYLFIRKIPVPPNECSEVMSNMVSEMLCAGIL---GRODACEDSGGEM 364
 DB 513 ANVGQGPVLTGVNLPIVERPVCKDSTRIRITDMFCAGYKPEDEKRGDACEGDSGPF 572
 QY 365 V--ASPHGTWFLVGLVSWGEGCLNHYGVYTKVSRVLDWI 403
 DB 573 VMKSPFNRMWYQWIGIVSWGEGCDKDKYGYTHVRLKWI 613
 RESULT 76
 US-10-072-012-410
 Sequence 410, Application US/10072012
 Publication No. US2004003493A1
 GENERAL INFORMATION:
 APPLICANT: Tchernev, Velizar
 APPLICANT: Spytek, Kimberly
 APPLICANT: Zethtusen, Bryan
 APPLICANT: Patuturajan, Meera
 APPLICANT: Shinkets, Richard
 APPLICANT: Li, Li
 APPLICANT: Gangolli, Neha
 APPLICANT: Padigaru, Muradhar
 APPLICANT: Anderson, David W.
 APPLICANT: Rastelli, Luca
 APPLICANT: Miller, Charles E.
 APPLICANT: Gerlach, Valerie

APPLICANT: Taupier Jr, Raymond J.
 APPLICANT: Guev, Vladimir Y.
 APPLICANT: Coleman, Steven D.
 APPLICANT: Wolenc, Adam R.
 APPLICANT: Pena, Carol E. A
 APPLICANT: Furtak, Katarzyna
 APPLICANT: Grose, William M.
 APPLICANT: Alebrook II, John P.
 APPLICANT: Lepley, Denise M.
 APPLICANT: Rieger, Daniel K.
 APPLICANT: Burgess, Catherine E.
 TITLE OF INVENTION: Proteins and Nucleic Acids Encoding Same
 FILE REFERENCE: 21402-258
 CURRENT APPLICATION NUMBER: US/10/072,012
 CURRENT FILING DATE: 2002-01-31
 PRIOR APPLICATION NUMBER: 60/265,102
 PRIOR FILING DATE: 2001-01-30
 PRIOR APPLICATION NUMBER: 60/265,514
 PRIOR FILING DATE: 2001-01-31
 PRIOR APPLICATION NUMBER: 60/265,517
 PRIOR FILING DATE: 2001-01-31
 PRIOR APPLICATION NUMBER: 60/265,412
 PRIOR FILING DATE: 2001-01-31
 PRIOR APPLICATION NUMBER: 60/265,395
 PRIOR FILING DATE: 2001-01-31
 PRIOR APPLICATION NUMBER: 60/266,406
 PRIOR FILING DATE: 2001-02-02
 PRIOR APPLICATION NUMBER: 60/266,767
 PRIOR FILING DATE: 2001-02-05
 PRIOR APPLICATION NUMBER: 60/267,057
 PRIOR FILING DATE: 2001-02-07
 PRIOR APPLICATION NUMBER: 60/266,975
 PRIOR FILING DATE: 2001-02-07
 PRIOR APPLICATION NUMBER: 60/267,459
 PRIOR FILING DATE: 2001-02-08
 Remaining Prior Application data removed - See File Wrapper or PALM.
 NUMBER OF SEQ ID NOS: 1391
 SOFTWARE: Patent Ver. 2.1
 SEQ ID NO 410
 LENGTH: 799
 TYPE: PRT
 ORGANISM: Mus musculus
 US-10-072-012-410
 Query Match 22.0%; Score 510.5; DB 12; Length 799;
 Best Local Similarity 34.9%; Pred. No. 8,7e-35;
 Matches 137; Conservative 52; Mismatches 141; Indels 63; Gaps 19;
 QY 40 FMSKATVSDQCLVPLHPQASLCCGHTCT---DGLSPSCDGRSGMEGRFCQREVSFL 96
 DB 436 YSLYNQSDPC-----PGEFLCSVNGLCVPAQDGIK---DQPNGLDERNCVGRANF- 483
 QY 97 NCSLNGGCHYCLLEVGRRCSCAPGYKLGDDLQCHPAVFPQGRPWKMEKTRSHLX 156
 DB 484 QCOEDS---TGISLPVY---CDROPCLNGSDEBQCEGV--FCGTFITQCE-DRSCVK 533
 QY 157 R-----DTEDEDO-----VDPRLIDGKTRRDSFQVVLIDSKKTLACGA 198
 DB 534 KNPEDQSDSCRGSDBOHCDCGLOG:SSRIVGTVSSEBGMFWQ-ASLQINGRHICGG 592
 QY 199 VLIHPSVLTAAHCHMBE---SKU-LVRIGEYDLARMKX--ELDDIKYVFAPNY 251
 DB 593 ALIADRWTITAAHCFQEDSNASPKLMTVFLGK--KQNSRWFGEVSRVRLPLHYHE 650
 QY 252 STNDIALILHAAOPATLSCTIVPICPDSGLARELNQAGETLVWGWSHRSREKAK 311
 DB 651 DSHDIDVALLQDHPVYATVRVCLP---ARSHFEPGCHGCTIWMG--AQREGPV 704
 QY 312 RNTFTVNFIRKIPVPPNECSEVMSNMVSEMLCAGILSDRODACEDSGGEMVA-SPHG 370
 DB 705 SN---TLQKVVQVQLVPDCLSEAYRYQVSPMLCAGRRKCKDAQGDUSGSLVCRPSG 761
 QY 371 TWFLVGLVSWGEGCLNHYGVYTVSRVLDWI 403

Db 762 RFLAGLVSMGLGCRPNFPGVYTRVIVNI 794

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RESULT 77
US-10-072-012-416
/ Sequence 416, Application US/10072012
/ Publication No. US20040033493A1
/ GENERAL INFORMATION:
/ APPLICANT: Tchernev, Velizar
/ APPLICANT: Spytek, Kimberly
/ APPLICANT: Zernhusen, Bryan
/ APPLICANT: Patlurajan, Meera
/ APPLICANT: Shinkets, Richard
/ APPLICANT: Li, Li
/ APPLICANT: Gangolli, Esha
/ APPLICANT: Padigaru, Muralidhara
/ APPLICANT: Anderson, David W.
/ APPLICANT: Rastelli, Luca
/ APPLICANT: Miller, Charles E.
/ APPLICANT: Gerlach, Valerie
/ APPLICANT: Taupier Jr, Raymond J.
/ APPLICANT: Gusev, Vladimir Y.
/ APPLICANT: Colman, Steven D.
/ APPLICANT: Molenc, Adam R.
/ APPLICANT: Pena, Carol E. A.
/ APPLICANT: Furtak, Katarzyna
/ APPLICANT: Grose, William K.
/ APPLICANT: Alsobrook II, John P.
/ APPLICANT: Lepley, Denise M.
/ APPLICANT: Rieger, Daniel K.
/ APPLICANT: Burgess, Catherine E.
/ TITLE OF INVENTION: Proteins and Nucleic Acids Encoding Same
/ FILE REFERENCE: 21402-258
/ CURRENT APPLICATION NUMBER: US/10/072,012
/ CURRENT FILING DATE: 2002-01-31
/ PRIOR APPLICATION NUMBER: 60/265,102
/ PRIOR FILING DATE: 2001-01-30
/ PRIOR APPLICATION NUMBER: 60/265,514
/ PRIOR FILING DATE: 2001-01-31
/ PRIOR APPLICATION NUMBER: 60/265,517
/ PRIOR FILING DATE: 2001-01-31
/ PRIOR APPLICATION NUMBER: 60/265,412
/ PRIOR FILING DATE: 2001-01-31
/ PRIOR APPLICATION NUMBER: 60/265,395
/ PRIOR FILING DATE: 2001-01-31
/ PRIOR APPLICATION NUMBER: 60/266,406
/ PRIOR FILING DATE: 2001-02-02
/ PRIOR APPLICATION NUMBER: 60/266,767
/ PRIOR FILING DATE: 2001-02-05
/ PRIOR APPLICATION NUMBER: 60/267,057
/ PRIOR FILING DATE: 2001-02-07
/ PRIOR APPLICATION NUMBER: 60/266,975
/ PRIOR FILING DATE: 2001-02-07
/ PRIOR APPLICATION NUMBER: 60/267,459
/ PRIOR FILING DATE: 2001-02-08
/ Remaining Prior Application data removed - See File Wrapper or PALM.
/ NUMBER OF SEQ ID NOS: 1391
/ SOFTWARE: Patent Ver. 2.1
/ SEQ ID NO 416
/ LENGTH: 799
/ TYPE: PRT
/ ORGANISM: Mus musculus
US-10-072-012-416

Query Match 22.0%, Score 510.5, DB 12, Length 799;
Best Local Similarity 34.9%, Pred. No. 8.7e-35;
Matches 137, Conservative 52, Mismatches 141, Indels 63, Gaps 19;
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QY 40 FMSHWYDQCVLFLERPCASLCGHGTCT---DGISFPCDCSCGMEGRFCQREVSFL 96
Db 436 YISLWQSDPC-----PGEFLCSYNGLCYACDGIK-----DCEMGIDENXCYCAMF- 483

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QY 97 NCSLNDGGCTHYCLAEVGRRCSCAPGYKLGDDLQCHPAVKPCGRPWKMEKRSKHLK 156
Db 484 QCGEDS---TCISLPRV-----CDRQPDCLNGSDHEQCOEGV--PCGHFFPGCE--DRSCVX 533
QY 157 R-----DTEQDQDQ-----VDEPLIDGKMTREDSFQWVYTLDDSKKTLACA 138
Db 534 KENPECDQGDRCRDSGEQHCDCGLQGLSSRTVGGTVSBEGBFWQ--ASLQIRGHITCGG 592
QY 199 VLIHPSWLTAAHOMD-----SKKL-LVRLGEYDLREBKKV--ELDDIDKEVFPVFNYSK 251
Db 593 ALIADRWVITAHCFQEDSMASPKMTVFYLGK--MRQSRNFGSVSKVRLFLHYHHE 650
QY 252 STINDIALHLAOPATLSQITVPICLPDSGLAEELNQAQOETLVTWGYSRREKAK 311
Db 651 DSHDIDVALLDHDPVYSAITVPCLP-----ARSHFFPGCHCMITGWG--AQEBCGPV 704
QY 312 RRETVLNFYKIVYDPAHSCFWSNWSNEMTCAGLGDQDRCRDSGCPVVA--STHG 370
Db 705 SN---TLQKVIVQVLPDCLSEAYRYQVSPRMLCAGYRKKKACQGDSDGPIVCRBP9G 761
QY 371 TWFLVGLVSMGEGGGLLHNYGYTKSRVYLDWI 403
Db 762 RFLAGLVSMGLGCRPNFPGVYTRVIVNI 794
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RESULT 78
US-09-981-151A-87
/ Sequence 87, Application US/09981151A
/ Publication No. US20030212256A1
/ GENERAL INFORMATION:
/ APPLICANT: Edinger, Shlomo R
/ APPLICANT: Gerlach, Valerie
/ APPLICANT: MacDougall, John R
/ APPLICANT: Malvankar, Muriel M
/ APPLICANT: Smithson, Glenda
/ APPLICANT: Miltec, Isabelle
/ APPLICANT: Peyman, John A
/ APPLICANT: Stone, David J
/ APPLICANT: Gunther, Erik
/ APPLICANT: Ellerman, Karen
/ APPLICANT: Shinkets, Richard A
/ APPLICANT: Padigaru, Muralidhara
/ APPLICANT: Guo, Xiaojia
/ APPLICANT: Patlurajan, Meera
/ APPLICANT: Taupier Jr, Raymond J
/ APPLICANT: Burgess, Catherine E
/ APPLICANT: Zernhusen, Bryan D
/ APPLICANT: Keneda, Rameah
/ APPLICANT: Spytek, Kimberly A
/ APPLICANT: Gangolli, Esha A
/ APPLICANT: Fernandes, Elma R
/ APPLICANT: Gorman, Linda
/ TITLE OF INVENTION: Proteins and Nucleic Acids Encoding Same
/ FILE REFERENCE: 21402-168
/ CURRENT APPLICATION NUMBER: US/09/981,151A
/ CURRENT FILING DATE: 2001-10-16
/ PRIOR APPLICATION NUMBER: 60/241,040
/ PRIOR FILING DATE: 2000-10-17
/ PRIOR APPLICATION NUMBER: 60/241,058
/ PRIOR FILING DATE: 2000-10-17
/ PRIOR APPLICATION NUMBER: 60/241,063
/ PRIOR FILING DATE: 2000-10-17
/ PRIOR APPLICATION NUMBER: 60/241,243
/ PRIOR FILING DATE: 2000-10-17
/ PRIOR APPLICATION NUMBER: 60/242,152
/ PRIOR FILING DATE: 2000-10-20
/ PRIOR APPLICATION NUMBER: 60/242,482
/ PRIOR FILING DATE: 2000-10-23
/ PRIOR APPLICATION NUMBER: 60/242,611
/ PRIOR FILING DATE: 2000-10-23
/ PRIOR APPLICATION NUMBER: 60/242,612
/ PRIOR FILING DATE: 2000-10-23
/ PRIOR APPLICATION NUMBER: 60/242,880
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;; PRIOR FILING DATE: 2000-10-24
;; PRIOR APPLICATION NUMBER: 60/242,881
;; PRIOR FILING DATE: 2000-10-24
;; Remaining Prior Application data removed - See File Wrapper or PAM.
;; NUMBER OF SEQ ID NOS: 160
;; SOFTWARE: Patent Ver. 2.1
;; SEQ ID NO 87
;; LENGTH: 230
;; TYPE: PRT
;; ORGANISM: Artificial Sequence
;; FEATURE:
;; OTHER INFORMATION: Description of Artificial Sequence: Trypsin-like
US-09-981-151A-87

Query Match 21.0%; Score 488.5; DB 11; Length 230;
Best Local Similarity 45.0%; Pred. No. 1,4e-33;
Matches 108; Conservative 32; Mismatches 85; Indels 15; Gaps 7;

QY 169 RLIDGKMTRRGDSFPMQVLLDSKKKLAAGAVLIHPSWLTAAHCHMBES--KTLVRLGEY 226
D 1 RIVGSEANIGSFPMQVSLQYRGGRHFGGSLISPRWLTAAHCVGSAPBSIRVLSGH 60
QY 227 DLRWKEWELDDIKVEFVHPNYSKSTTDNDIALHLAOPATLSQTIIVICLPDGLAER 286
D 61 DLSGGEETQ-TVKSKYIVHPNYPSTYDNDIALKLSEPTLSIVTAPICLPSSGVYV- 118
QY 287 ELNQAQGETLVGNGHSSREKARKNRTFVNLKIPVHPNCESEVMSN--MYSENML 344
D 119 ---PAGTTCTVSGWG---RTSESSGSLPDTLQEVNVEIVSNATCRRAVSGGPAITDML 171
QY 345 CAGLIGRDACGDSGPMWASFGHTWFLVGSWGE--GCGLLHNYGVYTVSSYLDWI 403
D 172 CAGLEGKXACGDSGSPVLCN-DPRWLVGVISWGSYGCAAPKPKGVYTVSSYLDWI 230

RESULT 79

US-09-981-151A-96
; Sequence 96, Application US/09981151A
; Publication No. US20030212256A1

GENERAL INFORMATION:

;; APPLICANT: Edinger, Shlomit R
;; APPLICANT: Gerlach, Valerie
;; APPLICANT: Macdougall, John R
;; APPLICANT: Malyankar, Muriel M
;; APPLICANT: Smithson, Glennda
;; APPLICANT: Miller, Isabelle
;; APPLICANT: Peyman, John A
;; APPLICANT: Stone, David J
;; APPLICANT: Gunther, Erik
;; APPLICANT: Ellerman, Karen
;; APPLICANT: Shmukets, Richard A
;; APPLICANT: Padigaru, Muralidhara
;; APPLICANT: Guo, Xiaojia
;; APPLICANT: Paturajan, Meera
;; APPLICANT: Taupier Jr, Raymond J
;; APPLICANT: Burgess, Catherine E
;; APPLICANT: Zerhusen, Bryan D
;; APPLICANT: Kerkuda, Ramesh
;; APPLICANT: Spytek, Kimberly A
;; APPLICANT: Gangolli, Baha A
;; APPLICANT: Fernandes, Elma R
TITLE OF INVENTION: Proteins and Nucleic Acids Encoding Same
FILE REFERENCE: 21402-168
CURRENT APPLICATION NUMBER: US/09/981,151A
PRIOR FILING DATE: 2001-10-16
PRIOR APPLICATION NUMBER: 60/241,040
PRIOR FILING DATE: 2000-10-17
PRIOR APPLICATION NUMBER: 60/241,058
PRIOR FILING DATE: 2000-10-17
PRIOR APPLICATION NUMBER: 60/241,063
PRIOR FILING DATE: 2000-10-17

;; PRIOR APPLICATION NUMBER: 60/241,243
;; PRIOR FILING DATE: 2000-10-17
;; PRIOR APPLICATION NUMBER: 60/242,152
;; PRIOR FILING DATE: 2000-10-20
;; PRIOR APPLICATION NUMBER: 60/242,482
;; PRIOR FILING DATE: 2000-10-23
;; PRIOR APPLICATION NUMBER: 60/242,611
;; PRIOR FILING DATE: 2000-10-23
;; PRIOR APPLICATION NUMBER: 60/242,612
;; PRIOR FILING DATE: 2000-10-23
;; PRIOR APPLICATION NUMBER: 60/242,880
;; PRIOR FILING DATE: 2000-10-24
;; PRIOR APPLICATION NUMBER: 60/242,881
;; PRIOR FILING DATE: 2000-10-24
;; Remaining Prior Application data removed - See File Wrapper or PAM.
;; NUMBER OF SEQ ID NOS: 160
;; SOFTWARE: Patent Ver. 2.1
;; SEQ ID NO 96
;; LENGTH: 230
;; TYPE: PRT
;; ORGANISM: Artificial Sequence
;; FEATURE:
;; OTHER INFORMATION: Description of Artificial Sequence: Trypsin-like
US-09-981-151A-96

Query Match 21.0%; Score 488.5; DB 11; Length 230;
Best Local Similarity 45.0%; Pred. No. 1,4e-33;
Matches 108; Conservative 32; Mismatches 85; Indels 15; Gaps 7;

QY 169 RLIDGKMTRRGDSFPMQVLLDSKKKLAAGAVLIHPSWLTAAHCHMBES--KTLVRLGEY 226
D 1 RIVGSEANIGSFPMQVSLQYRGGRHFGGSLISPRWLTAAHCVGSAPBSIRVLSGH 60
QY 227 DLRWKEWELDDIKVEFVHPNYSKSTTDNDIALHLAOPATLSQTIIVICLPDGLAER 286
D 61 DLSGGEETQ-TVKSKYIVHPNYPSTYDNDIALKLSEPTLSIVTAPICLPSSGVYV- 118
QY 287 ELNQAQGETLVGNGHSSREKARKNRTFVNLKIPVHPNCESEVMSN--MYSENML 344
D 119 ---PAGTTCTVSGWG---RTSESSGSLPDTLQEVNVEIVSNATCRRAVSGGPAITDML 171
QY 345 CAGLIGRDACGDSGPMWASFGHTWFLVGSWGE--GCGLLHNYGVYTVSSYLDWI 403
D 172 CAGLEGKXACGDSGSPVLCN-DPRWLVGVISWGSYGCAAPKPKGVYTVSSYLDWI 230

RESULT 80

US-10-042-865-155
; Sequence 155, Application US/10042865
; Publication No. US20040029216A1

GENERAL INFORMATION:

;; APPLICANT: Padigaru, Muralidhara
;; APPLICANT: Li, Li
;; APPLICANT: Zerhusen, Bryan D
;; APPLICANT: Casman, Stacie J
;; APPLICANT: Shenoy, Suresh G
;; APPLICANT: Spytek, Kimberly
;; APPLICANT: Zhong, Mei
;; APPLICANT: Gangolli, Baha A
;; APPLICANT: Burgess, Catherine E
;; APPLICANT: Paturajan, Meera
;; APPLICANT: Vernet, Corine A.M
;; APPLICANT: Taylor, Sarah
;; APPLICANT: Tehernev, Velizar T
;; APPLICANT: Miller, Charles E
;; APPLICANT: Guo, Xiaojia
;; APPLICANT: Boldog, Renace L
;; APPLICANT: Grose, William M
;; APPLICANT: Alsobrook II, John P
;; APPLICANT: Gerlach, Valerie L
;; APPLICANT: Edinger, Shlomit R
;; APPLICANT: Rothenberg, Mark E

```

; APPLICANT: Ellerman, Karen
; APPLICANT: MacDougall, John
; APPLICANT: Malyankar, Uriel M
; APPLICANT: Miller, Isabelle
; APPLICANT: Peyman, John
; APPLICANT: Smithson, Glenda
; APPLICANT: Gunther, Erik
; APPLICANT: Stone, David
; TITLE OF INVENTION: Proteins, Polynucleotides Encoding Them and Methods of
; TITLE OF INVENTION: Using the Same
; FILE REFERENCE: 21402-537
; CURRENT APPLICATION NUMBER: US/10/042,865
; PRIOR FILING DATE: 2002-05-17
; PRIOR APPLICATION NUMBER: 60/260,417
; PRIOR FILING DATE: 2001-01-09
; PRIOR APPLICATION NUMBER: 60/260,831
; PRIOR FILING DATE: 2001-01-10
; PRIOR APPLICATION NUMBER: 60/272,338
; PRIOR FILING DATE: 2001-02-28
; PRIOR APPLICATION NUMBER: 60/274,876
; PRIOR FILING DATE: 2001-03-09
; PRIOR APPLICATION NUMBER: 60/284,704
; PRIOR FILING DATE: 2001-04-18
; NUMBER OF SEQ ID NOS: 264
; SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 155
; LENGTH: 230
; TYPE: PRT
; ORGANISM: Homo sapiens
US-10-042-865-155

Query Match
Best Local Similarity 45.0%; Score 488.5; DB 12; Length 230;
Matches 108; Conservative 32; Mismatches 85; Indels 15; Gaps 7;

QY 169 RLIDGKMTTRGDSFMQVYVLDISKKKLACGAVLHPSWVLTAAHCDMS--KKLIVRLGEY 226
DB 1 RIVGSGEANTGSPFMQVSLQYRGRRFCGSLSPRWVLTAAHCVGSAAPSIRVLGSH 60
QY 227 DLRRWKEMLDDIKEVFNHNTSKSTTNDNDIALHLAQPATLSQTYVPCLPDSGLAE 286
DB 61 DLSSGERTQ-TVYKSKVIVHNPNTSTYDNDIALKLSEVTLSDVRAICLPSSGYNV- 118
QY 287 ELNAGQETLYTGMGYHSSREKAKRNTFYANFIKIPVPHNECEVMSN--MVSNNLT 344
DB 119 ---PAGTTCTVSGWG---RTSSSGSLPDTLQEVNVPYVSNATCRRAVSGGPAITDNL 171
QY 345 CAGLIGDRDACEGDSGGEPMVASFHGTWFLVGVSKGE-GCGGLNNYGVYTKVSRYLDMT 403
DB 172 CAGLIGGKDACGDSGGPIVCN-DPRWVLGVIVWSGYGCAFPKPGVYTRVSSYLDMT 230

RESULT 81
US-10-072-012-804
; Sequence 804, Application US/10072012
; GENERAL INFORMATION:
; APPLICANT: Tchiernev, Velizar
; APPLICANT: Spytek, Kimberly
; APPLICANT: Zehnusen, Bryan
; APPLICANT: Paturejan, Meera
; APPLICANT: Shimkets, Richard
; APPLICANT: Li, Li
; APPLICANT: Gangoli, Esha
; APPLICANT: Padigaru, Muralidhara
; APPLICANT: Anderson, David W.
; APPLICANT: Rastelli, Luca
; APPLICANT: Miller, Charles E.
; APPLICANT: Gerlach, Valerie
; APPLICANT: Taupier, Jr, Raymond J.
; APPLICANT: Gusev, Vladimir Y.
; APPLICANT: Coleman, Steven D.
; APPLICANT: Wolenc, Adam R.
```

```

; APPLICANT: Pena, Carol E. A
; APPLICANT: Furtak, Katarzyna
; APPLICANT: Grosse, William M.
; APPLICANT: Alsobrook II, John P.
; APPLICANT: Lepley, Denise M.
; APPLICANT: Rieger, Daniel K.
; APPLICANT: Burgess, Catherine E.
; TITLE OF INVENTION: Proteins and Nucleic Acids Encoding Same
; FILE REFERENCE: 21402-258
; CURRENT APPLICATION NUMBER: US/10/072,012
; PRIOR FILING DATE: 2002-01-31
; PRIOR APPLICATION NUMBER: 60/265,102
; PRIOR FILING DATE: 2001-01-30
; PRIOR APPLICATION NUMBER: 60/265,514
; PRIOR FILING DATE: 2001-01-31
; PRIOR APPLICATION NUMBER: 60/265,517
; PRIOR FILING DATE: 2001-01-31
; PRIOR APPLICATION NUMBER: 60/265,412
; PRIOR FILING DATE: 2001-01-31
; PRIOR APPLICATION NUMBER: 60/265,395
; PRIOR FILING DATE: 2001-01-31
; PRIOR APPLICATION NUMBER: 60/266,406
; PRIOR FILING DATE: 2001-02-02
; PRIOR APPLICATION NUMBER: 60/266,767
; PRIOR FILING DATE: 2001-02-05
; PRIOR APPLICATION NUMBER: 60/267,057
; PRIOR FILING DATE: 2001-02-07
; PRIOR APPLICATION NUMBER: 60/266,975
; PRIOR FILING DATE: 2001-02-07
; PRIOR APPLICATION NUMBER: 60/267,459
; PRIOR FILING DATE: 2001-02-08
; Remaining prior application data removed - See File Wrapper or PAM.
; NUMBER OF SEQ ID NOS: 1391
; SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 804
; LENGTH: 230
; TYPE: PRT
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: Description of Artificial Sequence: Trypsin-like
US-10-072-012-804

Query Match
Best Local Similarity 45.0%; Score 488.5; DB 12; Length 230;
Matches 108; Conservative 32; Mismatches 85; Indels 15; Gaps 7;

QY 169 RLIDGKMTTRGDSFMQVYVLDISKKKLACGAVLHPSWVLTAAHCDMS--KKLIVRLGEY 226
DB 1 RIVGSGEANTGSPFMQVSLQYRGRRFCGSLSPRWVLTAAHCVGSAAPSIRVLGSH 60
QY 227 DLRRWKEMLDDIKEVFNHNTSKSTTNDNDIALHLAQPATLSQTYVPCLPDSGLAE 286
DB 61 DLSSGERTQ-TVYKSKVIVHNPNTSTYDNDIALKLSEVTLSDVRAICLPSSGYNV- 118
QY 287 ELNAGQETLYTGMGYHSSREKAKRNTFYANFIKIPVPHNECEVMSN--MVSNNLT 344
DB 119 ---PAGTTCTVSGWG---RTSSSGSLPDTLQEVNVPYVSNATCRRAVSGGPAITDNL 171
QY 345 CAGLIGDRDACEGDSGGEPMVASFHGTWFLVGVSKGE-GCGGLNNYGVYTKVSRYLDMT 403
DB 172 CAGLIGGKDACGDSGGPIVCN-DPRWVLGVIVWSGYGCAFPKPGVYTRVSSYLDMT 230

RESULT 82
US-10-072-012-812
; Sequence 812, Application US/10072012
; GENERAL INFORMATION:
; APPLICANT: Tchiernev, Velizar
; APPLICANT: Spytek, Kimberly
; APPLICANT: Zehnusen, Bryan
; APPLICANT: Paturejan, Meera
```



```

Db          172 GAGLEGGKQACCGSDGGLVLGN-DPRMVLVGIIVSMGSYGCARFPMKPSVTTRVSSTLDM 230

RESULT 83
US-10-037-417-135
Sequence 135, Application US/10037417
Publication No. US20040052806A1
GENERAL INFORMATION:
APPLICANT: Kekuda, Ramesh
APPLICANT: Alsobrook II, John P
APPLICANT: Tchernev, Velizar T
APPLICANT: Liu, Xiaohong
APPLICANT: Spytek, Kimberly A
APPLICANT: Patlurajan, Meera
APPLICANT: Grose, William M
APPLICANT: Lepley, Denise M
APPLICANT: Burgess, Catherine E
APPLICANT: Vermet, Corine A.M.
APPLICANT: Li, Li
APPLICANT: Gorman, Linda
APPLICANT: Edinger, Shioeltz R
APPLICANT: Sciore, Paul
APPLICANT: Ellerman, Karen
APPLICANT: Malvankar, Uriel M
APPLICANT: Rothenberg, Mark
APPLICANT: Stone, David J
APPLICANT: Boldog, Ferenc L
APPLICANT: Guo, Xiaojia
APPLICANT: Shenoy, Suresh G
APPLICANT: Anderson, David W
APPLICANT: Padigaru, Muralidhara
APPLICANT: Taupier Jr, Raymond U
APPLICANT: Miller, Charles E
APPLICANT: Eisen, Andrew J
TITLE OF INVENTION: Proteins and Nucleic Acids Encoding Same
FILE REFERENCE: 21402-235
CURRENT APPLICATION NUMBER: US/10/037,417
CURRENT FILING DATE: 2002-09-20
PRIOR APPLICATION NUMBER: 60/260,018
PRIOR FILING DATE: 2001-01-05
PRIOR APPLICATION NUMBER: 60/260,360
PRIOR FILING DATE: 2001-01-08
PRIOR APPLICATION NUMBER: 60/272,411
PRIOR FILING DATE: 2001-02-28
PRIOR APPLICATION NUMBER: 60/272,817
PRIOR FILING DATE: 2001-03-02
PRIOR APPLICATION NUMBER: 60/291,186
PRIOR FILING DATE: 2001-05-15
PRIOR APPLICATION NUMBER: 60/303,231
PRIOR FILING DATE: 2001-07-05
PRIOR APPLICATION NUMBER: 60/305,060
PRIOR FILING DATE: 2001-07-12
PRIOR APPLICATION NUMBER: 60/318,405
PRIOR FILING DATE: 2001-09-10
PRIOR APPLICATION NUMBER: 60/318,700
PRIOR FILING DATE: 2001-09-12
NUMBER OF SEQ ID NOS: 227
SOFTWARE: PatentIn Ver. 2.1
SEQ ID NO 135
LENGTH: 230
TYPE: PRT
ORGANISM: Artificial Sequence
FEATURES:
OTHER INFORMATION: Description of Artificial Sequence: Trypsin-like
OTHER INFORMATION: serine protease Consensus Sequence
US-10-037-417-135

Query Match      21.0%; Score 488.5; DB 12; Length 230;
Best local Similarity 45.0%; Pred. No. 1,4e-33;
Matches 108; Conservative 32; Mismatches 85; Indels 15; Gaps 7

Gy 169 RLIDSKMTBGRDSEPMQVVLDSKKKLACGAVLIHPSWLTAAHCMDSS--KKLLVRLGEY 226
|::||| | ||| : || || |||||::| : ||||:

```

RESULT 84
US-10-032-139-66
; Sequence 66, Application US/10032189
; Publication No. US20030170630A1
; GENERAL INFORMATION:

1 APPLICANT: Tchernev, Veliar T
2 APPLICANT: Liu, Xiaohong
3 APPLICANT: Spivey, Kimberly A
4 APPLICANT: Zethusen, Bryan D
5 APPLICANT: Paturajan, Meera
6 APPLICANT: Grosse, William M
7 APPLICANT: Lepley, Denise M
8 APPLICANT: Burgess, Catherine E
9 APPLICANT: Shinkens, Richard A
10 APPLICANT: Grosse, William M
11 APPLICANT: Szekeres, Edward S
12 APPLICANT: Vernet, Corine A.M.
13 APPLICANT: Li, Li
14 APPLICANT: Casman, Stacie J
15 APPLICANT: Boldog, Ferenc L
16 APPLICANT: Gorman, Linda
17 APPLICANT: Gangoli, Esba A
18 APPLICANT: Fernandes, Elma R
19 APPLICANT: Rieger, Daniel K
20 APPLICANT: Edinger, Shlomit R
21 APPLICANT: Gunther, Erik
22 APPLICANT: Millet, Isabelle
23 APPLICANT: Sciore, Paul
24 APPLICANT: Ellerman, Karen
25 APPLICANT: MacDougall, John R
26 APPLICANT: Smithson, Glenda
27 TITLE OF INVENTION: Proteins and Nucleic Acids Encoding Same
28 FILE REFERENCE: 21402-228
29 CURRENT APPLICATION NUMBER: US/10/032,189
30 PRIOR FILING DATE: 2001-12-21
31 PRIOR APPLICATION NUMBER: 60/257,495
32 PRIOR FILING DATE: 2000-12-21
33 PRIOR APPLICATION NUMBER: 60/258,171
34 PRIOR FILING DATE: 2000-12-20
35 PRIOR APPLICATION NUMBER: 60/269,940
36 PRIOR FILING DATE: 2001-02-20
37 PRIOR APPLICATION NUMBER: 60/274,192
38 PRIOR FILING DATE: 2001-03-06
39 PRIOR APPLICATION NUMBER: 60/277,826
40 PRIOR FILING DATE: 2001-03-22
41 PRIOR APPLICATION NUMBER: 60/279,840
42 PRIOR FILING DATE: 2001-03-29
43 PRIOR APPLICATION NUMBER: 60/282,981
44 PRIOR FILING DATE: 2001-04-11
45 PRIOR APPLICATION NUMBER: 60/283,656
46 PRIOR FILING DATE: 2001-04-13
47 PRIOR APPLICATION NUMBER: 60/309,247
48 PRIOR FILING DATE: 2001-07-31
49 PRIOR APPLICATION NUMBER: 60/311,754
50 PRIOR FILING DATE: 2001-09-17
51 PRIOR APPLICATION NUMBER: 60/313,331
52 PRIOR FILING DATE: 2001-08-17

Query Match	21.0%;	Score 488.5;	DB 14;	Length 230;
Best Local Similarity	45.0%;	Pred. No. 1.4e-33;		
Matches 108;	Conservative 32;	Mismatches 85;	Indels 15;	Gaps 7

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OY      169  RLIDGMRNRDSDPMQVILDSKKKLCAGVILHSWVLTAAHOMES---KLLVRLAGEY 226
Db      1  RIVGSSSEANIGSPWQVSIQTQYGRGHRFGGSLISRWNVLTAAHCYVGSAPSRINRLGSH 60

OY      227  DLRWEKEMELDIDKEVEFVHPNYSKSTTDDIALHLAOPATLSQTIIVEICLPDGLAER 286
Db      61  DLSGGEHQ-VYKSKYLYHPRNPNSTYDDIALKLTSEPTVLTDPRIPLPSGGYV- 118

OY      287  ELNQAQETLVYNGVGHSSREKAKRNRTVNLFIKIYVPHNECSEFWSN--WYSENKL 344
Db      119  ---PACTTCTVSGWG---RTSESSGSLPEDTLQENVNPVSNATCRRAVSGGPATLDTNKL 171

OY      345  CAGILIEDRDACEDSGCPVASFHGTFVFLVWGSE-GGGLIHNVGYVTVSRHYLDML 403
Db      172  CAGGILRGKQACQSGSGEFLVNC-DPRKVLVGVVSNAGSICARPKNRGTYTVTSYLDML 230

```

```

1 RESULT 85
2 US-10-074-978A-221
3
4 Sequence 221, Application US/10074978A
5 Publication No. US20040010119A1
6
7 GENERAL INFORMATION:
8
9 APPLICANT: Leite, Mario
10 APPLICANT: Spytek, Kimberly A
11 APPLICANT: Guo, Xiaojia (Sasha)
12 APPLICANT: Fernandes, Elma
13 APPLICANT: Li, Li
14 APPLICANT: Kekuda, Ramesh
15 APPLICANT: Liu, Xiaohong
16 APPLICANT: Casman, Stacey
17 APPLICANT: Boldog, Ferenc
18 APPLICANT: Patuturajan, Meera
19 APPLICANT: Blalock, Angela
20 APPLICANT: Ballinger, Robert
21 APPLICANT: Vermet, Corine
22 APPLICANT: Tchernev, Velizar T
23 APPLICANT: Malvankar, Uriel M
24 APPLICANT: Gusev, Vladimir
25 APPLICANT: Rastelli, Luca
26 APPLICANT: Mezes, Peter S
27 APPLICANT: Billeman, Karen
28 APPLICANT: Heyes, Melvin P
29 APPLICANT: Herrman, John
30 APPLICANT: Pena, Carol B A
31 APPLICANT: Shinkovets, Richard A
32 APPLICANT: Taupier Jr, Raymond J
33 APPLICANT: Moore, No. US20040010119A11le
34 APPLICANT: Shenoy, Suresh
35 APPLICANT: Edinger, Shlomoit
36 APPLICANT: Gunther, Erik
37 APPLICANT: Stone, Dave
38 APPLICANT: Millet, Isabelle
39 APPLICANT: Peyman, John
40 APPLICANT: Smithson, Glenda
41
42 TITLE OF INVENTION: NOVEL PROTEINS AND NUCLEIC ACIDS ENCODING SAME
43
44 FILE REFERENCE: 21402-269
45
46 CURRENT APPLICATION NUMBER: US/10/074,978A
47
48 CURRENT FILING DATE: 2003-01-07

```

```

; PRIOR APPLICATION NUMBER: 60/268,221
; PRIOR FILING DATE: 2001-02-12
; PRIOR APPLICATION NUMBER: 60/335,109
; PRIOR FILING DATE: 2001-10-31
; PRIOR APPLICATION NUMBER: 60/312,284
; PRIOR FILING DATE: 2001-08-14
; PRIOR APPLICATION NUMBER: 60/268,496
; PRIOR FILING DATE: 2001-02-13
; PRIOR APPLICATION NUMBER: 60/276,703
; PRIOR FILING DATE: 2001-03-16
; PRIOR APPLICATION NUMBER: 60/330,293
; PRIOR FILING DATE: 2001-10-18
; PRIOR APPLICATION NUMBER: 60/322,127
; PRIOR FILING DATE: 2001-11-21
; PRIOR APPLICATION NUMBER: 60/280,899
; PRIOR FILING DATE: 2001-04-02
; PRIOR APPLICATION NUMBER: 60/310,797
; PRIOR FILING DATE: 2001-08-08
; PRIOR APPLICATION NUMBER: 60/268,646
; PRIOR FILING DATE: 2001-02-14
; Remaining Prior Application data removed - See File Wrapper or PALM.
; NUMBER OF SEQ ID NOS: 547
; SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 221
; LENGTH: 230
; TYPE: PRT
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: Description of Artificial Sequence: Tyrosin-like
; OTHER INFORMATION: serine protease domain sequence
US-10-074-978A-221

```

```

Query Match      21.0%; Score 488.5; DB 15; Length 230;
Best Local Similarity 45.0%; Pred. No. 1,4e-33;
Matches 108; Conservative 32; Mismatches 85; Indels 15; Gaps 7;

Qy 169 RLIDGKMTTRGDSFPMQVYLDSKKCLACGAVLIHPSWVLTAAHQMDS--KKLIVRLGEY 226
Db 1 RIVGSEANIGSPFMQVSLQYRGGRHFCGSLISPRWLTAAHCVGSAFSSIRFRLGSH 60
Qy 227 DLRWEKMLDLDIKYEVFHPNYSKSTTDNDIALHLAQPRTLSQTIYVICLPDSGLAER 286
Db 61 DLSSGEETQ-TVKSKYIVHPNYSSTYDNDIALKLSEVTLSDTVREICLPSSGYNV- 118
Qy 287 ELNQAQETLYTGWGYSHSRKREKRNRTFVLANIKIPVHPNEGSEVMSN--WVSENM 344
Db 119 ---PAGTTCVSGWG---RTSESSGSLPDTLOEVNVPVSNATCRAYSGGPATITNML 171
Qy 345 CAGILGRDACEGDSGPMVASFPGTWFLVGLVSWGE-GCGILAHYGVYTVKVSRYLDWI 403
Db 172 CAGLEGKDAQCGDSGGLVNCN-DPRNVLVGIVSWGSGYGCARPNKPGVYTVKVSRYLDWI 230

```

```

RESULT 86
US-10-074-978A-222
; Sequence 222, Application US/10074978A
; Publication No. US2004001019A1
; GENERAL INFORMATION:
; APPLICANT: Deltec, Mario
; APPLICANT: Spytek, Kimberly A
; APPLICANT: Guo, Xiaojia (Sasha)
; APPLICANT: Fernandes, Elma
; APPLICANT: Li, Li
; APPLICANT: Kekuda, Ramesh
; APPLICANT: Liu, Xiaohong
; APPLICANT: Casman, Stracie
; APPLICANT: Boldog, Ferenc
; APPLICANT: Patutajan, Meera
; APPLICANT: Blalock, Angela
; APPLICANT: Ballinger, Robert
; APPLICANT: Vernet, Corine
; APPLICANT: Tchenev, Velizar T
; APPLICANT: Malyankar, Uriel M

```

```

; APPLICANT: Gusev, Vladimir
; APPLICANT: Raetelli, Luca
; APPLICANT: Mezes, Peter S
; APPLICANT: Ellerman, Karen
; APPLICANT: Heyes, Melvin P
; APPLICANT: Heirman, John
; APPLICANT: Pena, Carol E A
; APPLICANT: Shinkets, Richard A
; APPLICANT: Taupier Jr, Raymond J
; APPLICANT: Moore, No. US2004001019A111e
; APPLICANT: Sheroj, Suresh
; APPLICANT: Edinger, Shiomulc
; APPLICANT: Gunther, Erik
; APPLICANT: Stone, Dave
; APPLICANT: Miller, Isabelle
; APPLICANT: Beyman, John
; APPLICANT: Smithson, Glenda
; TITLE OF INVENTION: NOVEL PROTEINS AND NUCLEIC ACIDS ENCODING SAME
; FILE REFERENCE: 21402-269
; CURRENT APPLICATION NUMBER: US/10/074,978A
; PRIOR APPLICATION NUMBER: 60/268,221
; PRIOR FILING DATE: 2003-01-07
; PRIOR APPLICATION NUMBER: 60/268,221
; PRIOR FILING DATE: 2001-02-12
; PRIOR APPLICATION NUMBER: 60/335,109
; PRIOR FILING DATE: 2001-10-31
; PRIOR APPLICATION NUMBER: 60/312,284
; PRIOR FILING DATE: 2001-08-14
; PRIOR APPLICATION NUMBER: 60/268,496
; PRIOR FILING DATE: 2001-02-13
; PRIOR APPLICATION NUMBER: 60/276,703
; PRIOR FILING DATE: 2001-03-16
; PRIOR APPLICATION NUMBER: 60/330,293
; PRIOR FILING DATE: 2001-10-18
; PRIOR APPLICATION NUMBER: 60/322,127
; PRIOR FILING DATE: 2001-11-21
; PRIOR APPLICATION NUMBER: 60/280,899
; PRIOR FILING DATE: 2001-04-02
; PRIOR APPLICATION NUMBER: 60/310,797
; PRIOR FILING DATE: 2001-08-08
; PRIOR APPLICATION NUMBER: 60/268,646
; PRIOR FILING DATE: 2001-02-14
; Remaining Prior Application data removed - See File Wrapper or PALM.
; NUMBER OF SEQ ID NOS: 547
; SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 222
; LENGTH: 230
; TYPE: PRT
; ORGANISM: Homo sapiens
US-10-074-978A-222

```

```

Query Match      21.0%; Score 488.5; DB 15; Length 230;
Best Local Similarity 45.0%; Pred. No. 1,4e-33;
Matches 108; Conservative 32; Mismatches 85; Indels 15; Gaps 7;

Qy 169 RLIDGKMTTRGDSFPMQVYLDSKKCLACGAVLIHPSWVLTAAHQMDS--KKLIVRLGEY 226
Db 1 RIVGSEANIGSPFMQVSLQYRGGRHFCGSLISPRWLTAAHCVGSAFSSIRFRLGSH 60
Qy 227 DLRWEKMLDLDIKYEVFHPNYSKSTTDNDIALHLAQPRTLSQTIYVICLPDSGLAER 286
Db 61 DLSSGEETQ-TVKSKYIVHPNYSSTYDNDIALKLSEVTLSDTVREICLPSSGYNV- 118
Qy 287 ELNQAQETLYTGWGYSHSRKREKRNRTFVLANIKIPVHPNEGSEVMSN--WVSENM 344
Db 119 ---PAGTTCVSGWG---RTSESSGSLPDTLOEVNVPVSNATCRAYSGGPATITNML 171
Qy 345 CAGILGRDACEGDSGPMVASFPGTWFLVGLVSWGE-GCGILAHYGVYTVKVSRYLDWI 403
Db 172 CAGLEGKDAQCGDSGGLVNCN-DPRNVLVGIVSWGSGYGCARPNKPGVYTVKVSRYLDWI 230

```

```

RESULT 87
US-10-055-569A-96

```

Sequence 96, Application US/10055569A
Publication No. US20040024181A1
GENERAL INFORMATION:
APPLICANT: Gangoli, Esha A
APPLICANT: Spytek, Kimberly A
APPLICANT: Gilbert, Jennifer
APPLICANT: Casman, Stacie
APPLICANT: Blalock, Angela
APPLICANT: Li, Li
APPLICANT: Vernet, Corine
APPLICANT: Shenoy, Suresh
APPLICANT: Mishra, Vishnu S
APPLICANT: Burtack, Katarzyna
APPLICANT: Gerlach, Valerie L
APPLICANT: Reinger, Shlomit
APPLICANT: Malyanker, Uriel
APPLICANT: Stone, David
APPLICANT: Millet, Isabelle
APPLICANT: Smithson, Glenda
APPLICANT: Gunther, Erik
APPLICANT: Ellerman, Karen
APPLICANT: Padigaru, Muralidhara
APPLICANT: Taupier Jr., Raymond J
APPLICANT: Anderson, David W
TITLE OF INVENTION: No. US20040024181A1el Human Proteins, Polynucleotides Encoding TH
TITLE OF INVENTION: Methods of Using the Same
FILE REFERENCE: 21402-191
CURRENT APPLICATION NUMBER: US/10/055,569A
PRIOR FILING DATE: 2001-10-26
PRIOR APPLICATION NUMBER: 60/243,642
PRIOR FILING DATE: 2000-10-26
PRIOR APPLICATION NUMBER: 60/243,320
PRIOR FILING DATE: 2000-10-26
PRIOR APPLICATION NUMBER: 60/243,592
PRIOR FILING DATE: 2000-10-26
PRIOR APPLICATION NUMBER: 60/243,681
PRIOR FILING DATE: 2000-10-27
PRIOR APPLICATION NUMBER: 60/243,863
PRIOR FILING DATE: 2000-10-27
PRIOR APPLICATION NUMBER: 60/244,443
PRIOR FILING DATE: 2000-10-31
PRIOR APPLICATION NUMBER: 60/245,029
PRIOR FILING DATE: 2000-11-01
PRIOR APPLICATION NUMBER: 60/244,995
PRIOR FILING DATE: 2000-11-01
PRIOR APPLICATION NUMBER: 60/245,293
PRIOR FILING DATE: 2000-11-02
PRIOR APPLICATION NUMBER: 60/245,315
PRIOR FILING DATE: 2000-11-02
Remaining Prior Application data removed - See File Wrapper or PALM.
NUMBER OF SEQ ID NOS: 137
SOFTWARE: Patentn Ver. 2.1
SEQ ID NO 96
LENGTH: 230
TYPE: PRT
ORGANISM: Homo sapiens
US-10-055-569A-96

Query Match 21.0%, Score 488.5, DB 16, Length 230;
Best Local Similarity 45.0%, Pred. No. 14e-33;
Matches 108, Conservative 32, Mismatches 85, Indels 15, Gaps 7;

QY 169 RLIDGKTRGDSFWQVVLIDSKKLAAGAVLIHPSWLTGAHOMDES--KKLIVRLGEY 226
DB 1 RIVGSGEANTGSPFWQVSLQYRGGRHPCGSLISPRVLTMAHCYVGSAPSSIVRLGSH 60
QY 227 DLRWKEMELDLDIKEVFEHNPYSKSTTNDIALIHAQPATLSQTYVICLPDPSGLAEF 286
DB 61 DLSGGEYQ-TVVSKVTVHPNYPSTYNDIALIKQSEPTLSDVRIICLPSSGTVV- 118
QY 287 ELNAGGELTVYGMGHSREKEXKRNRTFVNFILKIPVPHNCESEWSN--VYSNML 344
DB 119 ---PAGTTCTVSGMG---RTSSSGSLPPTLQEVNVTYSNATCRATVSGGPAITDML 171

QY 345 CAGIIGDRQDACEGSGCPMVASFHGTWPLVGLVSGE-GCGLLHNYGVYTKVSRYLDMI 403
DB 172 CAGGLEGGKADCGQDSGSEPLVGN-DPRNVGLVSGVSGYCARBNKRGVTRVSSYLDMI 230

RESULT 88
US-10-051-874-101
Sequence 101, Application US/10051874
Publication No. US2004005557A1
GENERAL INFORMATION:
APPLICANT: Padigaru, Muralidhara
APPLICANT: Alsobrook II, John P
APPLICANT: Colman, Steven D
APPLICANT: Spytek, Kimberly A
APPLICANT: Boldog, Kerenc AM
APPLICANT: Vernet, Corine AM
APPLICANT: Li, Li
APPLICANT: Shenoy, Suresh G
APPLICANT: Casman, Stacie J
APPLICANT: Guo, Xiaojia Sasha
APPLICANT: Edinger, Shlomit R
APPLICANT: McDougall, John R
APPLICANT: Malyanker, Uriel M
APPLICANT: Patturajan, Meera
APPLICANT: Shinkets, Richard A
APPLICANT: Pena, Carol EA
APPLICANT: Tochernev, Velizar T
APPLICANT: Zethusen, Bryan D
APPLICANT: Millet, Isabelle
APPLICANT: Miller, Charles E
APPLICANT: Lepley, Denise M
APPLICANT: Smithson, Glenda
APPLICANT: Baumgartner, Jason C
APPLICANT: Herrman, John L
APPLICANT: Peyman, John A
APPLICANT: Gorman, Linda
APPLICANT: Mezes, Peter D
APPLICANT: Kekuda, Ramesh
APPLICANT: Taupier Jr., Raymond J
APPLICANT: Gerlach, Valerie
APPLICANT: Grose, William M
APPLICANT: Liu, Xiaohong
APPLICANT: Ellerman, Karen
APPLICANT: Rothenberg, Mark
APPLICANT: Stone, David J
TITLE OF INVENTION: PROTEINS, POLYNUCLEOTIDES ENCODING THEM AND METHODS OF
TITLE OF INVENTION: USING THE SAME
FILE REFERENCE: 21402-245
CURRENT APPLICATION NUMBER: US/10/051,874
PRIOR FILING DATE: 2002-09-25
PRIOR APPLICATION NUMBER: 60/268,595
PRIOR FILING DATE: 2001-02-14
PRIOR APPLICATION NUMBER: 60/325,306
PRIOR FILING DATE: 2001-09-27
PRIOR APPLICATION NUMBER: 60/262,587
PRIOR FILING DATE: 2001-01-18
PRIOR APPLICATION NUMBER: 60/272,409
PRIOR FILING DATE: 2001-02-28
PRIOR APPLICATION NUMBER: 60/262,454
PRIOR FILING DATE: 2001-01-18
PRIOR APPLICATION NUMBER: 60/276,777
PRIOR FILING DATE: 2001-03-16
PRIOR APPLICATION NUMBER: 60/291,672
PRIOR FILING DATE: 2001-05-17
PRIOR APPLICATION NUMBER: 60/330,336
PRIOR FILING DATE: 2001-10-18
PRIOR APPLICATION NUMBER: 60/265,530
PRIOR FILING DATE: 2001-01-31
PRIOR APPLICATION NUMBER: 60/261,376
PRIOR FILING DATE: 2001-01-16
NUMBER OF SEQ ID NOS: 269

```

; SOFTWARE: Patentin Ver. 2.1
; SEQ ID NO 101
; LENGTH: 229
; TYPE: PRT
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: Description of Artificial Sequence: Tryp Spc,
; OTHER INFORMATION: Trypsin-like serine protease domain sequence
US-10-051-874-101

```

```

Query Match      20.8%; Score 483.5; DB 15; Length 229;
Best Local Similarity 44.8%; Pred. No. 3.8e-33;
Matches 107; Conservative 32; Mismatches 85; Indels 15; Gaps 7;

```

```

QY 170 LIDGKMTRRGDSFPMQVYLDSKKLAAGAVLHPSWLTAAHOMDS--KELVLRGEVD 227
   |:::|:::|:::|:::|:::|:::|:::|:::|:::|:::|:::|:::|:::|:::|
DB 1 IVGSEANIGSFPMQVSLQRRGHRFCGSLISPMWLTAAHCVGSAFSSIRVRLGSHD 60
QY 228 LRRWEKELDLDIKEVEFHPNYSKSTTDDIALHLAQAPTLISQTIIVPICLPDGLAERE 287
   |:::|:::|:::|:::|:::|:::|:::|:::|:::|:::|:::|:::|:::|:::|
DB 61 LSSGEETQ-TYKVSXVIVHPNYPSTYDNDIALKLSEPTLSDTVRPICLPSSGVNV-- 117
QY 288 LNOAGETLVYGMGSHSRREKAKRRTFVLFKIPVPHNECSWMSN--MYSNNMLC 345
   |:::|:::|:::|:::|:::|:::|:::|:::|:::|:::|:::|:::|:::|:::|
DB 118 --PAGTTCTVSGMG---RTSESSEGLSPDTLQEVNVPVSNATCRZAVSGGPATIDMMLC 171
QY 346 AGILGDRDACEGDSGPMVASFPGMTPLVGVWSMG--GGGLLHNYGVYTKVSRYLDMI 403
   |:::|:::|:::|:::|:::|:::|:::|:::|:::|:::|:::|:::|:::|:::|
DB 172 AGLEGKDAACQDSGSPVLGN-DPRWVLVGLVWSGSGCARPNKGGVYTRVSSYLDMI 229

```

RESULT 89

```

US-09-825-751A-72
; Sequence 72, Application US/09825751A
; Publication No. US20030065140A1
; GENERAL INFORMATION:
; APPLICANT: Curagen Corporation
; APPLICANT: Vernet, Corine A.M.
; APPLICANT: Fernandes, Elma R.
; APPLICANT: Taupier, Raymond J.
; APPLICANT: Quinn, Kerry B.
; APPLICANT: Spytek, Kimberly A.
; APPLICANT: Rastelli, Luca
; APPLICANT: Herрман, John L.
; TITLE OF INVENTION: Novel Proteins and Nucleic Acids Encoding Same
; FILE REFERENCE: 15966-750
; CURRENT APPLICATION NUMBER: US/09/825,751A
; PRIOR FILING DATE: 2001-04-30
; PRIOR APPLICATION NUMBER: 60/194,314
; PRIOR FILING DATE: 2000-04-03
; PRIOR APPLICATION NUMBER: 60/225,693
; PRIOR FILING DATE: 2000-08-16
; NUMBER OF SEQ ID NOS: 85
; SOFTWARE: Patentin Ver. 2.1
; SEQ ID NO 72
; LENGTH: 229
; TYPE: PRT
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: Description of Artificial Sequence: Consensus
; OTHER INFORMATION: Sequence
US-09-825-751A-72

```

```

Query Match      20.7%; Score 482; DB 12; Length 229;
Best Local Similarity 44.8%; Pred. No. 5.1e-33;
Matches 107; Conservative 32; Mismatches 86; Indels 14; Gaps 8;

```

```

QY 169 RLIDGKMTRRGDSFPMQVYLDSKKLAAGAVLHPSWLTAAHOMDS--DESKLLVRLGEY 226
   |:::|:::|:::|:::|:::|:::|:::|:::|:::|:::|:::|:::|:::|:::|
DB 1 RIVGSEANIGSFPMQVSLQYRGGRHFCGSLISPMWLTAAHCVGSDSIRVRLGSH 60
QY 227 DLRRWEKELDLDIKEVEFHPNYSKSTTDDIALHLAQAPTLISQTIIVPICLPDGLAER 286
   |:::|:::|:::|:::|:::|:::|:::|:::|:::|:::|:::|:::|:::|:::|

```

```

DB 61 DLSSGEETQ-TYKVSXVIVHPNYPSTYDNDIALKLSEPTLSDTVRPICLPSSGVNV- 118
QY 287 ELNOAGETLVYGMGSHSRREKAKRRTFVLFKIPVPHNECSWMS--MYSNNMLC 345
   |:::|:::|:::|:::|:::|:::|:::|:::|:::|:::|:::|:::|:::|:::|
DB 119 ---PAGTTCTVSGMG---RTSESSEGLSPDTLQEVNVPVSNATCRZAVSGGATIDMMLC 171
QY 346 AGILGDRDACEGDSGPMVASFPGMTPLVGVWSMG--GGGLLHNYGVYTKVSRYLDMI 403
   |:::|:::|:::|:::|:::|:::|:::|:::|:::|:::|:::|:::|:::|:::|
DB 172 AGLEGKDAACQDSGSPVLGN-DPRWVLVGLVWSGSGCARPNKGGVYTRVSSYLDMI 229

```

```

RESULT 90
US-09-776-191-10
; Sequence 10, Application US/09776191
; Publication No. US20030119168A1
; GENERAL INFORMATION:
; APPLICANT: Edwin L. Madison
; APPLICANT: Edgar O. Ong
; APPLICANT: Jium-Chern Yeh
; APPLICANT: Corvas International, Inc.
; TITLE OF INVENTION: NUCLEIC ACID MOLECULES ENCODING
; TITLE OF INVENTION: TRANSMEMBRANE SERINE PROTEASES, THE ENCODED PROTEINS AND
; TITLE OF INVENTION: METHODS BASED THEREON
; FILE REFERENCE: 24745-1607
; CURRENT APPLICATION NUMBER: US/09/776,191
; PRIOR FILING DATE: 2001-02-02
; PRIOR APPLICATION NUMBER: 60/213,124
; PRIOR FILING DATE: 2000-06-22
; PRIOR APPLICATION NUMBER: 60/234,840
; PRIOR FILING DATE: 2000-06-22
; PRIOR APPLICATION NUMBER: 60/179,982
; PRIOR FILING DATE: 2000-02-03
; PRIOR APPLICATION NUMBER: 60/183,542
; PRIOR FILING DATE: 2000-02-18
; PRIOR APPLICATION NUMBER: 09/657,968
; PRIOR FILING DATE: 2000-02-08
; NUMBER OF SEQ ID NOS: 72
; SOFTWARE: FastSeq for Windows Version 4.0
; SEQ ID NO 10
; LENGTH: 658
; TYPE: PRT
; ORGANISM: Homo Sapien
US-09-776-191-10

```

Query Match

```

20.4%; Score 474; DB 10; Length 658;
Best Local Similarity 33.3%; Pred. No. 9e-32;
Matches 125; Conservative 52; Mismatches 144; Indels 54; Gaps 18;

```

```

QY 58 PCAS--LCCGHTCT--DQISFSCDRSGWGRFCQREVSFLNCSLDGGCTHYCLEE 112
   |:::|:::|:::|:::|:::|:::|:::|:::|:::|:::|:::|:::|:::|:::|
DB 304 PCGEFLSVNGLCVPAQGVK---DCPNGLDERNCVCRAVF-QCKEDS--TCISLPLK 355
QY 113 VGNRRGSCAPGYKLGDLLQCHPAVFPQGRPWKMEKRSLSL-----RDTE 160
   |:::|:::|:::|:::|:::|:::|:::|:::|:::|:::|:::|:::|:::|:::|
DB 356 V---DDQDPCLANGSBERQCEGV--PCGTTTPOE-DRCVTKKPRPQCDGRPDGRDS 408
QY 161 DOE-----DDVPRLLIDGKMTRRGDSFPMQVYLDSKKLAAGAVLHPSWLTAAHOMD 214
   |:::|:::|:::|:::|:::|:::|:::|:::|:::|:::|:::|:::|:::|:::|
DB 409 DEHCEGGLQPPSSRIIVGAVSSEGMFWQ-ASIQYRGHILCGALLADWVLTAAHCHQ 467
QY 215 ESKLLVRLGEYDAR-WF--KW--BDDLDIXEVEFHPNYSKSTTDDIALHLAQAPTL 269
   |:::|:::|:::|:::|:::|:::|:::|:::|:::|:::|:::|:::|:::|:::|
DB 468 EDMASTVLMVTFVFGKWCNSRMPBEVSFKVSRLLHPHEEDSHDVLQDDHPVVR 527
QY 270 SQTIVPICLPDGLAEREELNOAGETLVYGMGSHSRREKAKRRTFVLFKIPVPHN 329
   |:::|:::|:::|:::|:::|:::|:::|:::|:::|:::|:::|:::|:::|:::|
DB 528 SAAYRVCLP---ARSHFBRGLHOMITGM--ALREGPSLN--ALQKVVDQLIPD 578
QY 330 BCEVSNMNMSENMLCAGILGDRDACEGDSGPMVA-SFPGMTPLVGVWSMGEGGLH 388
   |:::|:::|:::|:::|:::|:::|:::|:::|:::|:::|:::|:::|:::|:::|
DB 579 LCEVYRVYQVTRKLCAGYRKAKDAACQDSGSPVLCKALSGRWLTAGLVWSGSGGRN 638
QY 389 NGVYTKVSRYLDMI 403

```

Db 639 YFGVYTRITGVISWI 653

RESULT 91

US-10-156-214A-10
; Sequence 10, Application US/10156214A
; Publication No. US20040001801A1

GENERAL INFORMATION:

APPLICANT: Edwin L. Madison

APPLICANT: Joseph Edward Semple

APPLICANT: George P. Vlaeuk

APPLICANT: Scott Jeffrey Kemp

APPLICANT: Mallareddy Komandla

APPLICANT: Daniel Vana Siev

TITLE OF INVENTION: Conjugates Activated By Cell Surface Proteases and Therapeutic Us

FILE REFERENCE: 24745-1611

CURRENT APPLICATION NUMBER: US/10/156,214A

CURRENT FILING DATE: 2002-05-23

NUMBER OF SEQ ID NOS: 611

SOFTWARE: FastSeq for Windows Version 4.0

SEQ ID NO 10

LENGTH: 658

TYPE: PRT

ORGANISM: Homo Sapien

US-10-156-214A-10

Query Match 20.4%; Score 474; DB 15; Length 658;

Best Local Similarity 33.3%; Pred. No. 9e-32;

Matches 125; Conservative 52; Mismatches 144; Indels 54; Gaps 18;

Db 639 YFGVYTRITGVISWI 653

QY 58 PCAS--LCCGHGTCI---DGIISFSCDCRSQWGRPCQREVSFLNCSLNGGCTHYCLEE 112

DB 304 PCGGEFLCSVNGLCVPACDGVK---DCPNGDERRCVCRAATF-QCKEDS---TCISLTPK 355

QY 113 VGMRRCSAPGYKIGDILLQCHPAKPCGRPKRMEKKRSHLK-----RDTE 160

DB 356 V----CDGQPCNLNGSDEBQCOEGV--PCGTFTFQCE-DRSCVKKPQCDGRPCDRDGS 408

QY 161 DOE-----DQVDRLLDKMTRRGDSFWQVLLDSKKKLACGAVLIHPSWVLTAAHCD 214

DB 409 DEBHECGILGSPSSRIKVGAVSSBGEWQ--ASIQVRGHHICGALLADRWVLTAAHCFQ 467

QY 215 ESKKLAVRIGBYDLR--WE--ELDLDIKEVFHNPYSKSTNDIALLHLAQPATL 269

DB 463 EDSWASVLTMTVFLGKQWQSRKPEVSFKYSRLILHPHEBDSHDYDVALLDHPVVR 527

QY 270 SQTIVPICLPDSGLAEELNOAQETLVTGNGYSSREKAKRNTFTVNLFIKIPVPHN 329

DB 528 SAARVPCLP---ARSHFPEGLHCWITGWG--ALREGGPISN---ALQKVDVQILPD 578

QY 330 ECEVSNMNSNNMLCGLIIGRODACEGDSGGPMVA-SFHGTWLVGLVSWEGCGLLH 388

DB 579 LCEVYRYQVTPRMICAGYRKXKDCQGDGGPLVCKALSGRWFLAGLVSMGLGGRPN 638

QY 389 NYGVYTKVSRYLDMT 403

DB 639 YFGVYTRITGVISWI 653

QY 389 NYGVYTKVSRYLDMT 403

DB 639 YFGVYTRITGVISWI 653

QY 389 NYGVYTKVSRYLDMT 403

DB 639 YFGVYTRITGVISWI 653

QY 389 NYGVYTKVSRYLDMT 403

DB 639 YFGVYTRITGVISWI 653

QY 389 NYGVYTKVSRYLDMT 403

DB 639 YFGVYTRITGVISWI 653

QY 389 NYGVYTKVSRYLDMT 403

DB 639 YFGVYTRITGVISWI 653

QY 389 NYGVYTKVSRYLDMT 403

DB 639 YFGVYTRITGVISWI 653

QY 389 NYGVYTKVSRYLDMT 403

DB 639 YFGVYTRITGVISWI 653

QY 389 NYGVYTKVSRYLDMT 403

DB 639 YFGVYTRITGVISWI 653

QY 389 NYGVYTKVSRYLDMT 403

DB 639 YFGVYTRITGVISWI 653

QY 389 NYGVYTKVSRYLDMT 403

DB 639 YFGVYTRITGVISWI 653

QY 389 NYGVYTKVSRYLDMT 403

DB 639 YFGVYTRITGVISWI 653

QY 389 NYGVYTKVSRYLDMT 403

DB 639 YFGVYTRITGVISWI 653

QY 389 NYGVYTKVSRYLDMT 403

DB 639 YFGVYTRITGVISWI 653

FILE REFERENCE: 24745-1607
; CURRENT APPLICATION NUMBER: US/09/776,191

; CURRENT FILING DATE: 2001-02-02

; PRIOR APPLICATION NUMBER: 60/213,124

; PRIOR FILING DATE: 2000-06-22

; PRIOR APPLICATION NUMBER: 60/234,840

; PRIOR FILING DATE: 2000-06-22

; PRIOR APPLICATION NUMBER: 60/179,982

; PRIOR FILING DATE: 2000-02-03

; PRIOR APPLICATION NUMBER: 60/183,542

; PRIOR FILING DATE: 2000-02-18

; PRIOR APPLICATION NUMBER: 09/657,968

; PRIOR FILING DATE: 2000-02-08

; NUMBER OF SEQ ID NOS: 72

; SOFTWARE: FastSeq for Windows Version 4.0

; SEQ ID NO 8

; LENGTH: 802

; TYPE: PRT

; ORGANISM: Homo Sapien

US-09-776-191-8

Query Match 20.4%; Score 474; DB 10; Length 802;

Best Local Similarity 33.3%; Pred. No. 1.2e-31;

Matches 125; Conservative 52; Mismatches 144; Indels 54; Gaps 18;

Db 639 YFGVYTRITGVISWI 797

QY 58 PCAS--LCCGHGTCI---DGIISFSCDCRSQWGRPCQREVSFLNCSLNGGCTHYCLEE 112

DB 448 PCGGEFLCSVNGLCVPACDGVK---DCPNGDERRCVCRAATF-QCKEDS---TCISLTPK 499

QY 113 VGMRRCSAPGYKIGDILLQCHPAKPCGRPKRMEKKRSHLK-----RDTE 160

DB 500 V----CDGQPCNLNGSDEBQCOEGV--PCGTFTFQCE-DRSCVKKPQCDGRPCDRDGS 552

QY 161 DOE-----DQVDRLLDKMTRRGDSFWQVLLDSKKKLACGAVLIHPSWVLTAAHCD 214

DB 553 DEBHECGILGSPSSRIKVGAVSSBGEWQ--ASIQVRGHHICGALLADRWVLTAAHCFQ 611

QY 215 ESKKLAVRIGBYDLR--WE--ELDLDIKEVFHNPYSKSTNDIALLHLAQPATL 269

DB 612 EDSWASVLTMTVFLGKQWQSRKPEVSFKYSRLILHPHEBDSHDYDVALLDHPVVR 671

QY 270 SQTIVPICLPDSGLAEELNOAQETLVTGNGYSSREKAKRNTFTVNLFIKIPVPHN 329

DB 672 SAARVPCLP---ARSHFPEGLHCWITGWG--ALREGGPISN---ALQKVDVQILPD 722

QY 330 ECEVSNMNSNNMLCGLIIGRODACEGDSGGPMVA-SFHGTWLVGLVSWEGCGLLH 388

DB 723 LCEVYRYQVTPRMICAGYRKXKDCQGDGGPLVCKALSGRWFLAGLVSMGLGGRPN 782

QY 389 NYGVYTKVSRYLDMT 403

DB 783 YFGVYTRITGVISWI 797

QY 389 NYGVYTKVSRYLDMT 403

DB 783 YFGVYTRITGVISWI 797

QY 389 NYGVYTKVSRYLDMT 403

DB 783 YFGVYTRITGVISWI 797

QY 389 NYGVYTKVSRYLDMT 403

DB 783 YFGVYTRITGVISWI 797

QY 389 NYGVYTKVSRYLDMT 403

DB 783 YFGVYTRITGVISWI 797

QY 389 NYGVYTKVSRYLDMT 403

DB 783 YFGVYTRITGVISWI 797

QY 389 NYGVYTKVSRYLDMT 403

DB 783 YFGVYTRITGVISWI 797

QY 389 NYGVYTKVSRYLDMT 403

DB 783 YFGVYTRITGVISWI 797

QY 389 NYGVYTKVSRYLDMT 403

DB 783 YFGVYTRITGVISWI 797

QY 389 NYGVYTKVSRYLDMT 403

DB 783 YFGVYTRITGVISWI 797

QY 389 NYGVYTKVSRYLDMT 403

DB 783 YFGVYTRITGVISWI 797

QY 389 NYGVYTKVSRYLDMT 403

DB 783 YFGVYTRITGVISWI 797

QY 389 NYGVYTKVSRYLDMT 403

DB 783 YFGVYTRITGVISWI 797

QY 389 NYGVYTKVSRYLDMT 403

DB 783 YFGVYTRITGVISWI 797

QY 389 NYGVYTKVSRYLDMT 403

DB 783 YFGVYTRITGVISWI 797

QY 389 NYGVYTKVSRYLDMT 403

DB 783 YFGVYTRITGVISWI 797

QY 389 NYGVYTKVSRYLDMT 403

LENGTH: 802
TYPE: PRT
ORGANISM: Homo Sapiens
US-10-156-214A-8

Query Match 20.4%; Score 474; DB 15; Length 802;
Best Local Similarity 33.3%; Pred. No. 1,2e-31;
Matches 125; Conservative 52; Mismatches 144; Indels 54; Gaps 18;

QY 58 PCAS--LCCGHTCT---DIGSFSCDCRSGMGRFCQREVSFLNCSLJNCGGCTHCLBE 112
DB PCPEELCSYNGLCYPAQCDGVK---DCENGLDERNCVCRAAT-CKEDS---TCLSLPK 499
QY 113 VGMRRCSAPGYKLDLDLQCHPAVYKFCGRKMKMKRSHLK-----RDPE 160
DB 500 V---CDGQPDCLNSDEQCQEGV---PCGFTTQCR-DSCVKKPNQCDGRDCKDS 552
QY 161 DOE-----DQVDPRLIDGKTRRGDSPMQVVLDSKKKLACGAVLHPSWLTAAACMD 214
DB 553 DEHICGCGOGSSKIVGAVSSBGMFWQ-ASLQVGRHICGGLADNRVITAAACQ 611
QY 215 ESKKLVLRLGEYDERR-NE--KW-ELDIDKEVHPNYSKSTTDNDIALHLAQPATL 269
DB 612 EDMASTVMTVFLCKWQNSRMRPGEVSFKVSRLLHPYHEEDSHDYVALLQDHPVVR 671
QY 270 SQTIVPICPDGSLAERELNQAQGETLVGMGYSRPEKAKNRTFVLFKIPVPPHN 329
DB 672 SAARFVCLP---NRSHFEPGLHCTWGMG--ALRSGGPISN--ALQKVYQVLPQD 722
QY 330 ECSVMSNMVSNMCLCAGILGDRQDACEGDSGSPVVA-SFHGTWFLVGVMSBGCGLAH 388
DB 723 LCSVYRYQVYTRMLCAQYRKCKKACQDSDGGLVYKALSGMFLAGVSMGIGCGRPV 782
QY 369 NYGVYTKVSRKIDMT 403
DB 783 YFGVYTRITGVISWI 797

RESULT 94
US-10-600-187-7
Sequence 7, Application US/10600187
Publication No. US20040086910A1
GENERAL INFORMATION:
APPLICANT: Tanimoto, Timothy J.
TITLE OF INVENTION: TADG-15: An Extracellular Serine Protease
FILE REFERENCE: D6064CIP/D
CURRENT APPLICATION NUMBER: US/10/600,187
CURRENT FILING DATE: 2003-06-20
PRIOR APPLICATION NUMBER: US/09/654,600A
PRIOR FILING DATE: 2000-09-01
PRIOR APPLICATION NUMBER: 09/421,213
09/027,337
PRIOR FILING DATE: 1999-10-20
1998-02-20
NUMBER OF SEQ ID NOS: 98
SEQ ID NO 7
LENGTH: 255
TYPE: PRT
ORGANISM: Homo sapiens
FEATURE:
OTHER INFORMATION: Factor 7
US-10-600-187-7

Query Match 20.4%; Score 473.5; DB 16; Length 255;
Best Local Similarity 37.9%; Pred. No. 3.1e-32;
Matches 96; Conservative 52; Mismatches 90; Indels 15; Gaps 5;
QY 169 RLIDDKTRRGDSPPMVLDDSKKLACGAVLHPSWLTAAACMDSC---KLIVRLGE 225
DB 1 RIVGKVCPCKECPMQLLVNQAQ--CGGLTINTIIVWSABHCPKIKMKNLVAIVGE 59

QY 226 YDLRRMEKELDLIDKEVFPVHPNYSKSTTDNDIALHLAQPATLSQTVIPICLPSGLAE 285
DB 60 HDLSEHGDGDSRRVAQVILPSTVVGTTNNDIALHLAQPVLTHVPLCLPRTFSE 119
QY 286 BELNQAQGETLVGMGYSRPEKAKNRTFVLFKIPVPPHNESFVW-----SNVVS 340
DB 120 RLTAFFV-RFSLVSGMQLLDGATA-----LELMTANPRMTQDQLQSRKVGDSPPIT 173
QY 341 ENMLCAGILGDRQDCEGDSGSPVVA-SFHGTWFLVGVMSBGCGLHNYGVYTKVSRYL 400
DB 174 EYMFCAYSIGDSKDSKDSGSPHATHVGTWYLVGVMSGQATVGHGVYTVNSQYI 233
QY 401 DWIRGHIRDEAP 413
DB 234 EYLDKMRSEPR 246

RESULT 95
US-10-172-712-28
Sequence 28, Application US/10172712
Publication No. US20030125232A1
GENERAL INFORMATION:
APPLICANT: GRIFPIN, JOHN H.
APPLICANT: GALE, ANDREW U.
APPLICANT: GETZOFF, ELIZABETH D.
APPLICANT: PELLEGUER, JEAN-LUC
TITLE OF INVENTION: STABILIZED PROTEINS WITH ENGINEERED DISULFIDE BONDS
FILE REFERENCE: 4198-4001US1
CURRENT APPLICATION NUMBER: US/10/172,712
CURRENT FILING DATE: 2002-09-30
PRIOR APPLICATION NUMBER: 60/298,578
PRIOR FILING DATE: 2001-06-14
NUMBER OF SEQ ID NOS: 32
SOFTWARE: PatentIn Ver. 2.1
SEQ ID NO 28
LENGTH: 655
TYPE: PRT
ORGANISM: Homo sapiens
US-10-172-712-28

Query Match 20.4%; Score 473.5; DB 14; Length 655;
Best Local Similarity 28.3%; Pred. No. 9.9e-32;
Matches 141; Conservative 58; Mismatches 168; Indels 131; Gaps 18;
QY 15 RCTIEICDPFEAKELFQNVDTLAFMSKAVDGDCL-----VLPLEHPCASLC 63
DB 195 KOCGRKCFDRTKRYLEGGDMKARYAGHVEQCEGFRITWCGTHTKCLSSPCLN-- 252
QY 64 CGHGTCT-IDGIGSFSCDCRSGMGRFCQREVSFLNCSLJN----- 103
DB 253 --GTCCHLIVATGTVCACPGPAAGRLCNIEPD-ERCFLGNTGVRGVASTASGLSCIA 309
QY 104 -----GCTHYCL-----ERVGW-----RRCSC 120
DB 310 WNSDLIYQELHVDVSGAAILGLSPHAYCRNPNDNRPCYVVDLSALSWYCRACCS 369
QY 121 APGYKLGDLIDQCHPAVYKFCGRPKMKRSHLRDTEDEQVDPRLIDGKTRRGD 180
DB 370 LTRVQLSDILATLPEASPGRAQAGREHKKRTEFLR-----PRILGSSSLPS 418
QY 181 SPW--QVVLDSKKKLACGAVLHPSWLTAAACMDSC---KDLIVRLGEYDAREMEKE 235
DB 419 HPWTAIYIGDS-----FCAGSLVHTCWVVSAAHCFHSPPRDSVSVLQGFNRTTDT 474
QY 236 LDDIDKEVHPNYSKSTTDNDIALHLAQP-----ATLSQTVIPICLPSGLAERELN 290
DB 475 QTGIEKITYPTLYISVNPBDHDLVILKKGGRCAITSQVQVQICLPBEG-----STFP 530
QY 291 AQGETLVGMG-----HSSREKAKNRTFVLFKIPVPPHNCS--EYMSNVSE 341
DB 531 AGHKQIAGWHLDENVYSYSSSLRA-----LVPLVADHKCSSPEYVYADISF 579
QY 342 NMLCAGILGDRQDCEGDSGSPVVA-SFHGTWFLVGVMSBGCGLHNYGVYTVSRYL 401

Db 580 NMLCAGYFDCSDACQSGGGLACERKGVATITITSMGGGLHPRGYITVAVYD 639
Qy 402 WIGHIRKKEAPQKSMAP 419
Db 640 WINDIRL---PPRLVAP 654

RESULT 96
US-09-888-615-113
; Sequence 113, Application US/09888615
; Patent No. US20020064855A1
; GENERAL INFORMATION:
; APPLICANT: PLOWMAN, GREGORY
; APPLICANT: WHYTE, DAVID
; APPLICANT: CAENEPEL, SEAN
; APPLICANT: CHARVDCZAK, GLEN
; APPLICANT: MANNING, GERRARD
; APPLICANT: SUDARSANAM, SUCHA
; TITLE OF INVENTION: NOVEL PROTEASES
; FILE REFERENCE: 038602/214
; CURRENT APPLICATION NUMBER: US/09/888, 615
; CURRENT FILING DATE: 2001-06-26
; PRIOR APPLICATION NUMBER: 60/214,047
; PRIOR FILING DATE: 2000-06-26
; NUMBER OF SEQ ID NOS: 150
; SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 113
; LENGTH: 802
; TYPE: PRT
; ORGANISM: Homo sapiens
US-09-888-615-113

Query Match 20.2%; Score 470; DB 9; Length 802;
Best local similarity 33.1%; Pred. No. 2,5e-31;
Matches 144; Conservative 52; Mismatches 145; Indels 54; Gaps 18;

Qy 58 PQAS--LCCGHGTCI---DGIGSFCCQCRSGMGRCQREVSFLNCSLDNGGCTHYCEE 112
Db 448 PCGPEFLCSVGLCVPRACGVK---DQPMGLDERICVCRATF-QCKEDS---TCLSLPK 499
Qy 113 VGMREKSCAPCYKLGDLLQCHPAVKPCGRPKMEKKKSHK-----RDTE 160
Db 500 V-----CDGPPCLNMGSEDEQCQEGV--PCGTFQCE-DRCGVKPPPCDGRPCDRGS 552
Qy 161 DQE-----DQVPRLLDGKTRKRDSDFWYVLLDSKKLLAGAVLHPWVLTAAHGM 214
Db 553 DEBHCDGIGQPPSSRIWGAIVSSBSGEMFWQ-ASLQVGRHICGALLADRWVITAAHCGQ 611
Qy 215 ESKLLVRLAGEYDLRR-WE--HLDLDKEVFHPRVYSKSTTNDIALHLAQPAVL 269
Db 612 EDMSAVLMTVFLGKTVQNSKRPBVSFKVSLHLHPHEBDSHDVALLQDHPVVR 671
Qy 270 SQTIVICLIPDSGLAEELNQAGETLVGNGTHSSSEKAEARNFTVLFITIPVPHN 329
Db 672 SAIVRPVCLP---ARSHFEPGLHCWITWG--ALREGGPISTN---ALQKVVOQLIPD 722
Qy 330 ECEGEMSMNSENMLCGLIGRQDACEGSGGPMVA-SFHDTVLVWVMSGSGGLH 388
Db 723 LCEAVRYQVTPRLCAGYKKGKQDCQDSGGGLVCKLISRWPLAGVSWGLGGRPN 782
Qy 389 NYGVYTKVSRYLDMT 403
Db 783 YFGVYTRITGVISML 797

RESULT 97
US-09-978-295A-169
; Sequence 169, Application US/09978295A
; Patent No. US2002015606A1
; GENERAL INFORMATION:
; APPLICANT: Ashkenazi, Avi
; APPLICANT: Baker Kevin P.

APPLICANT: Botstein, David
APPLICANT: Desmoyers, Luc
APPLICANT: Eaton, Dan
APPLICANT: Ferrara, Napoleon
APPLICANT: Filvaroff, Ellen
APPLICANT: Fong, Sherman
APPLICANT: Gao, Wei-Qiang
APPLICANT: Gerber, Hanspeter
APPLICANT: Gerritsen, Mary E.
APPLICANT: Goddard, Audrey
APPLICANT: Godowski, Paul J.
APPLICANT: Grimaldi, J. Christopher
APPLICANT: Gurney, Austin L.
APPLICANT: Hillan, Kenneth J.
APPLICANT: Kijavitt, Ivar J.
APPLICANT: Kuo, Sophia S.
APPLICANT: Napier, Mary A.
APPLICANT: Pan, James J.
APPLICANT: Paoni, Nicholas F.
APPLICANT: Roy, Margaret Ann
APPLICANT: Shelton, David L.
APPLICANT: Stewart, Timothy A.
APPLICANT: Tumas, Daniel
APPLICANT: Williams, P. Mickey
APPLICANT: Wood, William I.
; TITLE OF INVENTION: Secreted and Transmembrane Polypeptides and Nucleic
; FILE REFERENCE: P2630P1C11
; CURRENT APPLICATION NUMBER: US/09/978,295A
; CURRENT FILING DATE: 2001-10-15
; PRIOR APPLICATION NUMBER: 09/918585
; PRIOR FILING DATE: 2001-07-30
; PRIOR APPLICATION NUMBER: 60/062250
; PRIOR FILING DATE: 1997-10-17
; PRIOR APPLICATION NUMBER: 60/064249
; PRIOR FILING DATE: 1997-11-03
; PRIOR APPLICATION NUMBER: 60/065311
; PRIOR FILING DATE: 1997-11-13
; PRIOR APPLICATION NUMBER: 60/066364
; PRIOR FILING DATE: 1997-11-21
; PRIOR APPLICATION NUMBER: 60/07450
; PRIOR FILING DATE: 1998-03-10
; PRIOR APPLICATION NUMBER: 60/077632
; PRIOR FILING DATE: 1998-03-11
; PRIOR APPLICATION NUMBER: 60/077641
; PRIOR FILING DATE: 1998-03-11
; PRIOR APPLICATION NUMBER: 60/077649
; PRIOR FILING DATE: 1998-03-11
; PRIOR APPLICATION NUMBER: 60/077791
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; PRIOR APPLICATION NUMBER: 60/078004
; PRIOR FILING DATE: 1998-03-13
; PRIOR APPLICATION NUMBER: 60/078886
; PRIOR FILING DATE: 1998-03-20
; PRIOR APPLICATION NUMBER: 60/078936
; PRIOR FILING DATE: 1998-03-20
; PRIOR APPLICATION NUMBER: 60/078910
; PRIOR FILING DATE: 1998-03-20
; PRIOR APPLICATION NUMBER: 60/078939
; PRIOR FILING DATE: 1998-03-20
; PRIOR APPLICATION NUMBER: 60/079294
; PRIOR FILING DATE: 1998-03-25
; PRIOR APPLICATION NUMBER: 60/079656
; PRIOR FILING DATE: 1998-03-26
; PRIOR APPLICATION NUMBER: 60/079664
; PRIOR FILING DATE: 1998-03-27
; PRIOR APPLICATION NUMBER: 60/079689
; PRIOR FILING DATE: 1998-03-27
; PRIOR APPLICATION NUMBER: 60/079663
; PRIOR FILING DATE: 1998-03-27
; PRIOR APPLICATION NUMBER: 60/079728
; PRIOR FILING DATE: 1998-03-27
; PRIOR APPLICATION NUMBER: 60/079786

PRIOR APPLICATION NUMBER: 60/078910	PRIOR FILING DATE: 1998-03-20	PRIOR APPLICATION NUMBER: 60/078939	PRIOR FILING DATE: 1998-03-20	PRIOR APPLICATION NUMBER: 60/079224	PRIOR FILING DATE: 1998-03-25	PRIOR APPLICATION NUMBER: 60/079566	PRIOR FILING DATE: 1998-03-26	PRIOR APPLICATION NUMBER: 60/079664	PRIOR FILING DATE: 1998-03-27	PRIOR APPLICATION NUMBER: 60/079689	PRIOR FILING DATE: 1998-03-27	PRIOR APPLICATION NUMBER: 60/079663	PRIOR FILING DATE: 1998-03-27	PRIOR APPLICATION NUMBER: 60/079728	PRIOR FILING DATE: 1998-03-27	PRIOR APPLICATION NUMBER: 60/079786	PRIOR FILING DATE: 1998-03-27	PRIOR APPLICATION NUMBER: 60/079920	PRIOR FILING DATE: 1998-03-30	PRIOR APPLICATION NUMBER: 60/079923	PRIOR FILING DATE: 1998-03-30	PRIOR APPLICATION NUMBER: 60/080105	PRIOR FILING DATE: 1998-03-31	PRIOR APPLICATION NUMBER: 60/080107	PRIOR FILING DATE: 1998-03-31	PRIOR APPLICATION NUMBER: 60/080165	PRIOR FILING DATE: 1998-03-31	PRIOR APPLICATION NUMBER: 60/080194	PRIOR FILING DATE: 1998-03-31	PRIOR APPLICATION NUMBER: 60/080327	PRIOR FILING DATE: 1998-04-01	PRIOR APPLICATION NUMBER: 60/080328	PRIOR FILING DATE: 1998-04-01	PRIOR APPLICATION NUMBER: 60/080333	PRIOR FILING DATE: 1998-04-01	PRIOR APPLICATION NUMBER: 60/080334	PRIOR FILING DATE: 1998-04-01	PRIOR APPLICATION NUMBER: 60/081070	PRIOR FILING DATE: 1998-04-08	PRIOR APPLICATION NUMBER: 60/081049	PRIOR FILING DATE: 1998-04-08	PRIOR APPLICATION NUMBER: 60/081071	PRIOR FILING DATE: 1998-04-08	PRIOR APPLICATION NUMBER: 60/081155	PRIOR FILING DATE: 1998-04-08	PRIOR APPLICATION NUMBER: 60/081203	PRIOR FILING DATE: 1998-04-09	PRIOR APPLICATION NUMBER: 60/081229	PRIOR FILING DATE: 1998-04-09	PRIOR APPLICATION NUMBER: 60/081955	PRIOR FILING DATE: 1998-04-15	PRIOR APPLICATION NUMBER: 60/081817	PRIOR FILING DATE: 1998-04-15	PRIOR APPLICATION NUMBER: 60/081819	PRIOR FILING DATE: 1998-04-15	PRIOR APPLICATION NUMBER: 60/081952	PRIOR FILING DATE: 1998-04-15	PRIOR APPLICATION NUMBER: 60/081838	PRIOR FILING DATE: 1998-04-15	PRIOR APPLICATION NUMBER: 60/082568	PRIOR FILING DATE: 1998-04-21	PRIOR APPLICATION NUMBER: 60/082569	PRIOR FILING DATE: 1998-04-21	PRIOR APPLICATION NUMBER: 60/082704	PRIOR FILING DATE: 1998-04-22	PRIOR APPLICATION NUMBER: 60/082804	PRIOR FILING DATE: 1998-04-22	PRIOR APPLICATION NUMBER: 60/082700	PRIOR FILING DATE: 1998-04-22	PRIOR APPLICATION NUMBER: 60/082797	PRIOR FILING DATE: 1998-04-22	PRIOR APPLICATION NUMBER: 60/082796	PRIOR FILING DATE: 1998-04-22
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PRIOR FILING DATE: 1998-04-23
PRIOR APPLICATION NUMBER: 60/083336
PRIOR FILING DATE: 1998-04-27
PRIOR APPLICATION NUMBER: 60/083322
PRIOR FILING DATE: 1998-04-28
PRIOR APPLICATION NUMBER: 60/083392
PRIOR FILING DATE: 1998-04-29
PRIOR APPLICATION NUMBER: 60/083495
PRIOR FILING DATE: 1998-04-29
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PRIOR APPLICATION NUMBER: 60/083500
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PRIOR APPLICATION NUMBER: 60/083742
PRIOR FILING DATE: 1998-04-30
PRIOR APPLICATION NUMBER: 60/084366
PRIOR FILING DATE: 1998-05-05
PRIOR APPLICATION NUMBER: 60/084414
PRIOR FILING DATE: 1998-05-06
PRIOR APPLICATION NUMBER: 60/084441
PRIOR FILING DATE: 1998-05-06
PRIOR APPLICATION NUMBER: 60/084637
PRIOR FILING DATE: 1998-05-07
PRIOR APPLICATION NUMBER: 60/084639
PRIOR FILING DATE: 1998-05-07
PRIOR APPLICATION NUMBER: 60/084640
PRIOR FILING DATE: 1998-05-07
PRIOR APPLICATION NUMBER: 60/084538
PRIOR FILING DATE: 1998-05-07
PRIOR APPLICATION NUMBER: 60/084600
PRIOR FILING DATE: 1998-05-07
PRIOR APPLICATION NUMBER: 60/084627
PRIOR FILING DATE: 1998-05-07
PRIOR APPLICATION NUMBER: 60/084643
PRIOR FILING DATE: 1998-05-07
PRIOR APPLICATION NUMBER: 60/085339
PRIOR FILING DATE: 1998-05-13
PRIOR APPLICATION NUMBER: 60/085338
PRIOR FILING DATE: 1998-05-13
PRIOR APPLICATION NUMBER: 60/085323
PRIOR FILING DATE: 1998-05-13
PRIOR APPLICATION NUMBER: 60/085582
PRIOR FILING DATE: 1998-05-15
PRIOR APPLICATION NUMBER: 60/085700
PRIOR FILING DATE: 1998-05-15
PRIOR APPLICATION NUMBER: 60/085689
PRIOR FILING DATE: 1998-05-15
PRIOR APPLICATION NUMBER: 60/085579
PRIOR FILING DATE: 1998-05-15
PRIOR APPLICATION NUMBER: 60/085580
PRIOR FILING DATE: 1998-05-15
PRIOR APPLICATION NUMBER: 60/085573
PRIOR FILING DATE: 1998-05-15
PRIOR APPLICATION NUMBER: 60/085704
PRIOR FILING DATE: 1998-05-15
PRIOR APPLICATION NUMBER: 60/085697

Query Match 20.2%; Score 470; DB 9; Length 802;

Best Local Similarity 33.1%; Pred. No. 2.5e-31;
Matches 124; Conservative 52; Mismatches 145; Indels 54; Gaps 18;

QY 58 PNAS-ICCHGTCI---DGLGSSCCCRSGMEGRFCQREVSFANGSLNGGCHTYCIEE 112

Db 448 PCGEFLCSVNGLCVPACDSVK-----DCPNGLDERNCVKATF--CCNKEDS---TCISLPK 499
QY 113 VGNRCSGAPGYKXGDDLLQCHAVYPPGCRPMKMEKKRSLX-----RDTE 160
Db 500 V----CDGQPDCLMSDEECQGGV--PGTFTTQCE--DRSCYKRPNGQDGRPDGRDS 552
QY 161 DOE-----DQVDPRLIDGMRTRGDSPMQVLLDSKKKLAGAVLHPSVWLTAACHMD 214
Db 553 DEHDCOGLQGPSSRIYGAVSSEBWPWQ--ASLQVYGRHICGALIDRWVITTAHCRQ 611
QY 215 ESKKLVLRLGEYDUR--ME--KW--ELDDIKYFVFNPSKSTTDNDIALHLAQPAFL 269
Db 612 EDMSASTVLMVTFGLQKWNRSRMPGEVSFKYSRLHPRYHEBDSHDYVALLQDHPVR 671
QY 270 SQITVIPCDSGLARELNOAGETLVYNGYSSREKAKKNETFYVNFKIPVVPAN 329
Db 672 SAAYRFLCP-----ARSHFEPGLHCKITWG--ALMBEGPISN--ALQKVDYQLIPQ 722
QY 330 ECFEWSNNVSNMNLCAGLIGDRQDACEGSGGPWA--SFHGTFWFLVGLVSMGSCGLH 388
Db 723 LQSEAYRYQVTPRMLCAGYRKKKDAGQDSGGLVYCKALSGWFLAGVSMGLGCGRPN 782
QY 389 NYGYTKVSRXYDWT 403
Db 783 YFGYTRITGVLSWT 797

RESULT 99
US-09-978-192A-169
Sequence 169, Application US/09978192A
Patent No. US2002017553A1
GENERAL INFORMATION:
APPLICANT: Ashkenazi, Avi
APPLICANT: Baker Kevin P.
APPLICANT: Botstein, David
APPLICANT: Desnoyers, Luc
APPLICANT: Eaton, Dan
APPLICANT: Ferrara, Napoleon
APPLICANT: Filvaroff, Ellen
APPLICANT: Fong, Sherman
APPLICANT: Gao, Wei-Qiang
APPLICANT: Gettel, Hanspeter
APPLICANT: Gerritsen, Mary E.
APPLICANT: Goddard, Audrey
APPLICANT: Godowski, Paul J.
APPLICANT: Grimaldi, J. Christopher
APPLICANT: Gurney, Austin L.
APPLICANT: Hillam, Kenneth J.
APPLICANT: Kijewin, Ivar J.
APPLICANT: Kuo, Sophia S.
APPLICANT: Napier, Mary A.
APPLICANT: Pan, James
APPLICANT: Paoni, Nicholas F.
APPLICANT: Roy, Margaret Ann
APPLICANT: Shelton, David L.
APPLICANT: Stewart, Timothy A.
APPLICANT: Tumas, Daniel
APPLICANT: Williams, P. Mickey
APPLICANT: Wood, William I.
TITLE OR INVENTION: Secreted and Transmembrane Polypeptides and Nucleic
FILE REFERENCE: P2630FLC9
CURRENT APPLICATION NUMBER: US/09/978,192A
PRIOR FILING DATE: 2001-10-15
PRIOR APPLICATION NUMBER: 09/918585
PRIOR FILING DATE: 2001-07-30
PRIOR APPLICATION NUMBER: 60/062250
PRIOR FILING DATE: 1997-10-17
PRIOR APPLICATION NUMBER: 60/064249
PRIOR FILING DATE: 1997-11-03
PRIOR APPLICATION NUMBER: 60/065311
PRIOR FILING DATE: 1997-11-13
PRIOR APPLICATION NUMBER: 60/066364

1	PRIOR FILING DATE: 1997-11-21	1	PRIOR APPLICATION NUMBER: 60/081952
2	PRIOR APPLICATION NUMBER: 60/077450	2	PRIOR FILING DATE: 1998-04-15
3	PRIOR FILING DATE: 1998-03-10	3	PRIOR APPLICATION NUMBER: 60/081838
4	PRIOR APPLICATION NUMBER: 60/077632	4	PRIOR FILING DATE: 1998-04-15
5	PRIOR FILING DATE: 1998-03-11	5	PRIOR APPLICATION NUMBER: 60/082568
6	PRIOR APPLICATION NUMBER: 60/077641	6	PRIOR FILING DATE: 1998-04-21
7	PRIOR FILING DATE: 1998-03-11	7	PRIOR APPLICATION NUMBER: 60/082569
8	PRIOR APPLICATION NUMBER: 60/077649	8	PRIOR FILING DATE: 1998-04-21
9	PRIOR FILING DATE: 1998-03-11	9	PRIOR APPLICATION NUMBER: 60/082704
10	PRIOR APPLICATION NUMBER: 60/077791	10	PRIOR FILING DATE: 1998-04-22
11	PRIOR FILING DATE: 1998-03-12	11	PRIOR APPLICATION NUMBER: 60/082804
12	PRIOR APPLICATION NUMBER: 60/078004	12	PRIOR FILING DATE: 1998-04-22
13	PRIOR FILING DATE: 1998-03-13	13	PRIOR APPLICATION NUMBER: 60/082700
14	PRIOR APPLICATION NUMBER: 60/078886	14	PRIOR FILING DATE: 1998-04-22
15	PRIOR FILING DATE: 1998-03-20	15	PRIOR APPLICATION NUMBER: 60/082797
16	PRIOR APPLICATION NUMBER: 60/078936	16	PRIOR FILING DATE: 1998-04-22
17	PRIOR FILING DATE: 1998-03-20	17	PRIOR APPLICATION NUMBER: 60/082796
18	PRIOR APPLICATION NUMBER: 60/078910	18	PRIOR FILING DATE: 1998-04-23
19	PRIOR FILING DATE: 1998-03-20	19	PRIOR APPLICATION NUMBER: 60/083336
20	PRIOR APPLICATION NUMBER: 60/078939	20	PRIOR FILING DATE: 1998-04-27
21	PRIOR FILING DATE: 1998-03-20	21	PRIOR APPLICATION NUMBER: 60/083322
22	PRIOR APPLICATION NUMBER: 60/079294	22	PRIOR FILING DATE: 1998-04-28
23	PRIOR FILING DATE: 1998-03-25	23	PRIOR APPLICATION NUMBER: 60/083392
24	PRIOR APPLICATION NUMBER: 60/079656	24	PRIOR FILING DATE: 1998-04-29
25	PRIOR FILING DATE: 1998-03-26	25	PRIOR APPLICATION NUMBER: 60/083495
26	PRIOR APPLICATION NUMBER: 60/079664	26	PRIOR FILING DATE: 1998-04-29
27	PRIOR FILING DATE: 1998-03-27	27	PRIOR APPLICATION NUMBER: 60/083496
28	PRIOR APPLICATION NUMBER: 60/079689	28	PRIOR FILING DATE: 1998-04-29
29	PRIOR FILING DATE: 1998-03-27	29	PRIOR APPLICATION NUMBER: 60/083499
30	PRIOR APPLICATION NUMBER: 60/079663	30	PRIOR FILING DATE: 1998-04-29
31	PRIOR FILING DATE: 1998-03-27	31	PRIOR APPLICATION NUMBER: 60/083545
32	PRIOR APPLICATION NUMBER: 60/079728	32	PRIOR FILING DATE: 1998-04-29
33	PRIOR FILING DATE: 1998-03-27	33	PRIOR APPLICATION NUMBER: 60/083554
34	PRIOR APPLICATION NUMBER: 60/079786	34	PRIOR FILING DATE: 1998-04-29
35	PRIOR FILING DATE: 1998-03-27	35	PRIOR APPLICATION NUMBER: 60/083558
36	PRIOR APPLICATION NUMBER: 60/079920	36	PRIOR FILING DATE: 1998-04-29
37	PRIOR FILING DATE: 1998-03-30	37	PRIOR APPLICATION NUMBER: 60/083559
38	PRIOR APPLICATION NUMBER: 60/079923	38	PRIOR FILING DATE: 1998-04-29
39	PRIOR FILING DATE: 1998-03-30	39	PRIOR APPLICATION NUMBER: 60/083500
40	PRIOR APPLICATION NUMBER: 60/080105	40	PRIOR FILING DATE: 1998-04-29
41	PRIOR FILING DATE: 1998-03-31	41	PRIOR APPLICATION NUMBER: 60/083742
42	PRIOR APPLICATION NUMBER: 60/080107	42	PRIOR FILING DATE: 1998-04-30
43	PRIOR FILING DATE: 1998-03-31	43	PRIOR APPLICATION NUMBER: 60/084366
44	PRIOR APPLICATION NUMBER: 60/080165	44	PRIOR FILING DATE: 1998-05-05
45	PRIOR FILING DATE: 1998-03-31	45	PRIOR APPLICATION NUMBER: 60/084414
46	PRIOR APPLICATION NUMBER: 60/080194	46	PRIOR FILING DATE: 1998-05-06
47	PRIOR FILING DATE: 1998-03-31	47	PRIOR APPLICATION NUMBER: 60/084441
48	PRIOR APPLICATION NUMBER: 60/080327	48	PRIOR FILING DATE: 1998-05-06
49	PRIOR FILING DATE: 1998-04-01	49	PRIOR APPLICATION NUMBER: 60/084637
50	PRIOR APPLICATION NUMBER: 60/080328	50	PRIOR FILING DATE: 1998-05-07
51	PRIOR FILING DATE: 1998-04-01	51	PRIOR APPLICATION NUMBER: 60/084639
52	PRIOR APPLICATION NUMBER: 60/080333	52	PRIOR FILING DATE: 1998-05-07
53	PRIOR FILING DATE: 1998-04-01	53	PRIOR APPLICATION NUMBER: 60/084640
54	PRIOR APPLICATION NUMBER: 60/080334	54	PRIOR FILING DATE: 1998-05-07
55	PRIOR FILING DATE: 1998-04-01	55	PRIOR APPLICATION NUMBER: 60/084600
56	PRIOR APPLICATION NUMBER: 60/081070	56	PRIOR FILING DATE: 1998-05-07
57	PRIOR FILING DATE: 1998-04-08	57	PRIOR APPLICATION NUMBER: 60/084627
58	PRIOR APPLICATION NUMBER: 60/081049	58	PRIOR FILING DATE: 1998-05-07
59	PRIOR FILING DATE: 1998-04-08	59	PRIOR APPLICATION NUMBER: 60/084634
60	PRIOR APPLICATION NUMBER: 60/081071	60	PRIOR FILING DATE: 1998-05-07
61	PRIOR FILING DATE: 1998-04-08	61	PRIOR APPLICATION NUMBER: 60/085339
62	PRIOR APPLICATION NUMBER: 60/081195	62	PRIOR FILING DATE: 1998-05-13
63	PRIOR FILING DATE: 1998-04-08	63	PRIOR APPLICATION NUMBER: 60/085333
64	PRIOR APPLICATION NUMBER: 60/081203	64	PRIOR FILING DATE: 1998-05-13
65	PRIOR FILING DATE: 1998-04-09	65	PRIOR APPLICATION NUMBER: 60/085322
66	PRIOR APPLICATION NUMBER: 60/081229	66	PRIOR FILING DATE: 1998-05-13
67	PRIOR FILING DATE: 1998-04-09	67	PRIOR APPLICATION NUMBER: 60/085582
68	PRIOR APPLICATION NUMBER: 60/081955	68	PRIOR FILING DATE: 1998-05-15
69	PRIOR FILING DATE: 1998-04-15		

PRIOR FILING DATE: 1998-05-15
PRIOR APPLICATION NUMBER: 60/085579
PRIOR FILING DATE: 1998-05-15
PRIOR APPLICATION NUMBER: 60/085580
PRIOR FILING DATE: 1998-05-15
PRIOR APPLICATION NUMBER: 60/085573
PRIOR FILING DATE: 1998-05-15
PRIOR APPLICATION NUMBER: 60/085704
PRIOR FILING DATE: 1998-05-15
PRIOR APPLICATION NUMBER: 60/08597

Query Match 20.2%; Score 470; DB 9; Length 802;
Best Local Similarity 33.1%; Pred No. 2 Se-31;
Matches 124; Conservative 52; Mismatches 145; Indels 54; Gaps 18;

QY 58 PCAS--LCCGHTCI--DGISPCDCRSQSGMGRFCQREVSFLNCSIDNGCTHYCLEE 112
DB 448 PCGEPLCSVNGLCVPACDGVK---DCPNGLDERNCVCRAVF--QCKEDS---TCISLPK 499
QY 113 VQWRRCSCAPGKYGDLQCPAPKPCGPFMEKXKRSKLT-----RDE 160
DB 500 V---CDGQPCOLNGSDEECQDQGV--PCGTFTPOCE--DRSCVKKPNQCDGRPDGRDS 552
QY 161 DOE-----DQVDPRLIDGKMTFRGDSFWQVVLIDSKKXLAACAVLHPSWVLTAAHCWD 214
DB 553 DEHHCCHGCGPSSRIYGVASSEBHWQ--ASLQVRGHHICGALLIDRWVITAAHCFO 611
QY 215 ESKKLLVRLGEYDRLR--WE--KW--ELDLIKGVFVHENVYSSTTDNDIALHAPATL 269
DB 612 EDSMASTVLMVTFGLKWQNSRWPGSVSFKYSRLILHPYEDSDHYVALDLDPVVR 671
QY 270 SQITVPCIPDSGLAEELNQAQELVMTGWSHSSSEKARNTFVNFRTKIPVPHN 329
DB 672 SAVRVCLP---ASHPEPELHCWITGNG--ALNEGSPISN---ALQKVDQLLPD 722
QY 330 ECSEVSNMVSNNMLCAGILDPDQACGDSGGMVA--SFHGTWELVGLVSWGBGGLH 388
DB 723 LCSEARVQVTPRMLCAGYRKXKKAQCGDSGGPLVCKALSGWFLAGVSWGLGGRN 782
QY 389 NYGVYTKVSRYYDWT 403
DB 783 YFGVYTRITGVISWT 797

RESULT 100
US-09-999-832A-169
Sequence 169, Application US/0999832A
Publication No. US20020192706A1
GENERAL INFORMATION:
APPLICANT: Ashkenazi, Avi
APPLICANT: Baker Kevin P.
APPLICANT: Botstein, David
APPLICANT: Deemoyers, Luc
APPLICANT: Eaton, Dan
APPLICANT: Ferrara, Napoleon
APPLICANT: Filvaroff, Ellen
APPLICANT: Fong, Sherman
APPLICANT: Gao, Wei-Qiang
APPLICANT: Gerber, Hanspeter
APPLICANT: Gerritsen, Mary E.
APPLICANT: Goddard, Audrey
APPLICANT: Godowski, Paul J.
APPLICANT: Grimaldi, J. Christopher
APPLICANT: Gurney, Auefin L.
APPLICANT: Hillan, Kenneth J.
APPLICANT: Kljavin, Ivar J.
APPLICANT: Kuo, Sophia S.
APPLICANT: Napier, Mary A.
APPLICANT: Pan, James
APPLICANT: Paoni, Nicholas F.
APPLICANT: Roy, Margaret Ann
APPLICANT: Shelton, David L.
APPLICANT: Stewart, Timothy A.

APPLICANT: Tuma, Daniel
APPLICANT: Williams, P. Mickey
APPLICANT: Wood, William I.
TITLE OF INVENTION: Secreted and Transmembrane Polypeptides and Nucleic
TITLE OF INVENTION: Acids Encoding the Same
FILE REFERENCE: P2630PIC63
CURRENT APPLICATION NUMBER: US/09/999,832A
CURRENT FILING DATE: 2001-10-24
PRIOR APPLICATION NUMBER: 09/918585
PRIOR FILING DATE: 2001-07-30
PRIOR APPLICATION NUMBER: 60/062250
PRIOR FILING DATE: 1997-10-17
PRIOR APPLICATION NUMBER: 60/064249
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PRIOR FILING DATE: 1998-03-31
PRIOR APPLICATION NUMBER: 60/080194
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PRIOR FILING DATE: 1998-04-01
PRIOR APPLICATION NUMBER: 60/081070

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1 PRIOR APPLICATION NUMBER: 60/084600
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3 PRIOR FILING DATE: 1998-05-07
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5 PRIOR APPLICATION NUMBER: 60/084627
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17 PRIOR APPLICATION NUMBER: 60/085338
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21 PRIOR APPLICATION NUMBER: 60/085323
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33 PRIOR APPLICATION NUMBER: 60/085689
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39 PRIOR FILING DATE: 1998-05-15
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41 PRIOR APPLICATION NUMBER: 60/085580
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43 PRIOR FILING DATE: 1998-05-15
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45 PRIOR APPLICATION NUMBER: 60/085573
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49 PRIOR APPLICATION NUMBER: 60/085704
50
51 PRIOR FILING DATE: 1998-05-15
52
53 PRIOR APPLICATION NUMBER: 60/085597
54

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Query Match          20.2% Score 470; DB 9; Length 802;
Best Local Similarity 33.1%; Pred. No. 2.5e-31;
Matches 124; Conservative 52; Mismatches 145; Indels 54; Gaps 18

QY      58 PCAS--LCCGHCCTC---DGIQSFSQCDCRSQWGEGRFCQRREVSLNCSLDNGSCTHYLEE 112
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DB      448 PCEBFLGSVWGTLCPAPCGGVK----DCPNGLDERWCVCRAFTF-CCKEDS---TCISLPX 499
QY      113 VGMRRSCAPGYKIGDDLLQCHPAKFPQCRPMKEKKESAHLK-----BDTE 160
500 V---CDGPQDLNGSBEBQQEGV--PCGFHTTQOE-DRCVKKNPPQCDRPRCDGS 552
QY      161 DOE-----DQVDPEPLIDGMTRRDSDSPWQVLLDSKKKLACGAVLIHPSWYLTAACHMD 214
DB      553 DEHDGCGIQGHSSSHIYGAVNSEGEEMFWQ-ASLQVRGRHLGGALLADRWITAAHCFQ 611
QY      215 ESKKLIVRLGEYDLRR-WE--KW--ELDLIKKVFYHNPIYSKSTTDNDIALHLHAQPTL 269
DB      612 EDMSASTVMATVFLCKWKQNSRWPGVSFKTSRLILHPHEDEHDYDALLOLDHPVPR 671
QY      270 SOLTVPLCLPDGSLAERLNMAOQETLTWTGWYHSREKEAKRNRTFVLFIKIPVPHN 329
DB      672 SNAVRPCLP-----ARSHFEPEGLHWITGWG--ALAREGPSIN--ALQKDVOQLIHOD 722
QY      330 ECSEWSNNVSWENMLICAGSLIGDRQDACSGDSGGGPNVA-SFHGTFFLVGLVSNCGCGILL 388
DB      722 LCSEAYRYQTTPRMCAAGYRKCKKACOGSDGSPVCKALSGRWFLAGLVSMGLGGRPN 782
QY      389 NGVTYTKSRKYDNL 403
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DB      783 YFGYTRITRVLSWI 797

RESULT 101
US-09-978-189-169
; Sequence 169, Application US/09978189
; Publication No. US20030004102A1
; GENERAL INFORMATION:
; APPLICANT: Ashkenazi, Avi
; APPLICANT: Baker Kevin P.
; APPLICANT: Botstein, David
; APPLICANT: Desmoyere, Luc
; APPLICANT: Eaton, Dan
; APPLICANT: Ferrara, Napoleon
; APPLICANT: Flivaotoff, Ellen

```

APPLICANT: Fong, Sherman
APPLICANT: Gao, Wei-Qiang
APPLICANT: Gerber, Hanspeter
APPLICANT: Gerritsen, Mary E.
APPLICANT: Goddard, Audrey
APPLICANT: Godowski, Paul J.
APPLICANT: Grimaldi, J. Christopher
APPLICANT: Gurney, Austin L.
APPLICANT: Hillan, Kenneth J.
APPLICANT: Kijavini, Ivar U.
APPLICANT: Kuo, Sophia S.
APPLICANT: Napier, Mary A.
APPLICANT: Pan, James
APPLICANT: Paoni, Nicholas F.
APPLICANT: Roy, Margaret Ann
APPLICANT: Shelton, David L.
APPLICANT: Stewart, Timothy A.
APPLICANT: Tumas, Daniel
APPLICANT: Williams, P. Mickey
APPLICANT: Wood, William I.
TITLE OF INVENTION: Secreted and Transmembrane Polypeptides and Nucleic
FILE REFERENCE: P2630PIC7
CURRENT APPLICATION NUMBER: US/09/978,189
PRIOR FILING DATE: 2001-10-15
PRIOR APPLICATION NUMBER: 09/918585
PRIOR FILING DATE: 2001-07-30
PRIOR APPLICATION NUMBER: 60/062250
PRIOR FILING DATE: 1997-10-17
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 PRIOR FILING DATE: 1998-05-15
 PRIOR APPLICATION NUMBER: 60/085573
 PRIOR FILING DATE: 1998-05-15
 PRIOR APPLICATION NUMBER: 60/085704
 PRIOR FILING DATE: 1998-05-15
 PRIOR APPLICATION NUMBER: 60/085697

Query Match 20.2%; Score 470; DB 10; Length 802;
 Best Local Similarity 33.1%; Pred. No. 2.5e-31;
 Matches 124; Conservative 52; Mismatches 145; Indels 54; Gaps 18;

58 PCAS--LCGSGTCT---DGTGFSQDCRSQMGESRFOREVSFLNCSLNDGAGCTHYCLEE 112
 448 PCGEGFLCSYNGLCVPACDGVK---DCPNGLDERNCVCRAFE-QCKEDS---TCISLPK 499
 113 VGMRCSCAPGYKLDLLQCHPAVYKPCGRPMKMKRSHLK-----RDTE 160
 500 V-----CDGQPDCLNCSDEQCEQGV--PCGTFTQCE-DRSCVKKPNQCDGRDRCDS 552
 161 DOE-----DQVDPRLIDGKMTRRGDSPMQVVLNDSKKKLAGAVLIHPSVLTAAHAMD 214
 553 DEHDCGCIQGPSSRTVGAVSSGEMPMQ-ASIQVGRNHCIGALLIDRWITTAHCFQ 611
 215 ESKLLVRLGEYDLR-WE--KM--ELDDI KEVFEVHPNYSKSTTDNDIALHLAQPATL 269
 612 EDMSASTVMTVFLCKTWQNSRWGSEVSKSLRLHPYHEBDSHDYVALQLDHPVVR 671
 270 SQTIVPICPDGSLAEFLNQAQETLVYMGKSHSREKAKRRTFVNLFIKIPVYPHN 329
 672 SAAVAVPCLP---ARSHFEFGJHCWTIGWG--ALREGGPISN--ALQKVQQLIPQD 722
 330 ECEVNNMYSNNMLCAGILGDRQDACEGDSGAPVVA-SFHGTWFLVGVISWBGCGCLH 388
 723 LCSBAKXYQVTRPMLCAGYRKGRKXKDHQGDSDSGFLYCKALSGWFLAAGVNSWGLGCGRRN 782

QY 389 NYGVYTKVSRYLDMI 403
 DB 783 YGVYTRITGVISWI 797

RESULT 102
 US-09-978-608A-169
 ; Sequence 169, Application US/09978608A
 ; Publication No. US20030045462A1
 ; GENERAL INFORMATION:
 ; APPLICANT: Ashkenazi, Avi
 ; APPLICANT: Baker Kevin P.
 ; APPLICANT: Botstein, David
 ; APPLICANT: Desnoyers, Luc
 ; APPLICANT: Eaton, Dan
 ; APPLICANT: Ferrara, Napoleon
 ; APPLICANT: Filvaroff, Ellen
 ; APPLICANT: Fong, Sherman
 ; APPLICANT: Gao, Wei-Qiang
 ; APPLICANT: Gerder, Hanspeter
 ; APPLICANT: Gerlitsen, Mary B.
 ; APPLICANT: Goddard, Audrey
 ; APPLICANT: Godowski, Paul J.
 ; APPLICANT: Grimaldi, J. Christopher
 ; APPLICANT: Gurley, Austin L.
 ; APPLICANT: Hillan, Kenneth J.
 ; APPLICANT: Kijavlin, Ivar J.
 ; APPLICANT: Kuo, Sophia S.
 ; APPLICANT: Napier, Mary A.
 ; APPLICANT: Pan, James
 ; APPLICANT: Paoni, Nicholas F.
 ; APPLICANT: Roy, Margaret Ann
 ; APPLICANT: Shelton, David L.
 ; APPLICANT: Stewart, Timothy A.
 ; APPLICANT: Tumas, Daniel
 ; APPLICANT: Williams, P. Mickey
 ; APPLICANT: Wood, William I.
 ; TITLE OF INVENTION: Secreted and Transmembrane Polypeptides and Nucleic
 ; FILE REFERENCE: P2630PIC22
 ; CURRENT APPLICATION NUMBER: US/09/978,608A
 ; NUMBER OF SEQ. ID NOS: 624
 ; Prior Application removed - See File Wrapper or Palm
 ; SEQ ID NO 169
 ; LENGTH: 802
 ; TYPE: PRT
 ; ORGANISM: Homo sapiens
 US-09-978-608A-169

Query Match 20.2%; Score 470; DB 10; Length 802;
 Best Local Similarity 33.1%; Pred. No. 2.5e-31;
 Matches 124; Conservative 52; Mismatches 145; Indels 54; Gaps 18;

58 PCAS--LCGSGTCT---DGTGFSQDCRSQMGESRFOREVSFLNCSLNDGAGCTHYCLEE 112
 448 PCGEGFLCSYNGLCVPACDGVK---DCPNGLDERNCVCRAFE-QCKEDS---TCISLPK 499
 113 VGMRCSCAPGYKLDLLQCHPAVYKPCGRPMKMKRSHLK-----RDTE 160
 500 V-----CDGQPDCLNCSDEQCEQGV--PCGTFTQCE-DRSCVKKPNQCDGRDRCDS 552
 161 DOE-----DQVDPRLIDGKMTRRGDSPMQVVLNDSKKKLAGAVLIHPSVLTAAHAMD 214
 553 DEHDCGCIQGPSSRTVGAVSSGEMPMQ-ASIQVGRNHCIGALLIDRWITTAHCFQ 611
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 270 SQTIVPICPDGSLAEFLNQAQETLVYMGKSHSREKAKRRTFVNLFIKIPVYPHN 329
 672 SAAVAVPCLP---ARSHFEFGJHCWTIGWG--ALREGGPISN--ALQKVQQLIPQD 722

QY 330 ECEWMSNMVSENMLCAGIIGDRDACEGDSGGPMVA-SFHGTWELVGLVSGGCGLLH 388
DB 723 LCSEAVRYQVTPRMLCAGYRKGRKQKACGDSGGPLVCKALSGRWFAGLWVSGGGRPN 782
QY 389 NYGVYTKVSRVLDWT 403
DB 783 YFGVYTRITGVISWT 797

RESULT 103

US-09-978-585A-169
Sequence 169, Application US/09978585A

Publication No. US20030049633A1
GENERAL INFORMATION:

APPLICANT: Ashkenazi, Avi
APPLICANT: Baker Kevin P.
APPLICANT: Botstein, David
APPLICANT: Deemoyers, Luc
APPLICANT: Baton, Dan
APPLICANT: Ferrara, Napoleon
APPLICANT: Filvaroff, Ellen
APPLICANT: Fong, Sherman
APPLICANT: Gao, Wei-Qiang
APPLICANT: Gerber, Hanspeter
APPLICANT: Grimaldi, J. Christopher
APPLICANT: Goddard, Audrey
APPLICANT: Grimaldi, J. Christopher
APPLICANT: Gurney, Austin L.
APPLICANT: Hillan, Kenneth J.
APPLICANT: Kijavlin, Ivar J.
APPLICANT: Kuo, Sophia S.
APPLICANT: Napier, Mary A.
APPLICANT: Pan, James
APPLICANT: Paoni, Nicholas F.
APPLICANT: Roy, Margaret Ann
APPLICANT: Shelton, David L.
APPLICANT: Stewart, Timothy A.
APPLICANT: Tumas, Daniel
APPLICANT: Williams, P. Mickey
APPLICANT: Wood, William I.
TITLE OF INVENTION: Secreted and Transmembrane Polypeptides and Nucleic
TITLE OF INVENTION: Acids Encoding the Same
FILE REFERENCE: P2630P1C15
CURRENT APPLICATION NUMBER: US/09/978,585A
CURRENT FILING DATE: 2001-10-16
NUMBER OF SEQ ID NOS: 624
Prior Application removed - See File Wrapper or Palm
SEQ ID NO 169
LENGTH: 802
TYPE: PRT
ORGANISM: Homo sapiens
US-09-978-585A-169

Query Match 20.2% Score 470; DB 10; Length 802;
Best Local Similarity 33.1% Pred. No. 2,5e-31;

Matches 144; Conservative 52; Mismatches 145; Indels 54; Gaps 18;

QY 58 PCAS-LCCGHGTCT---DGIGSFSCDCRSQWGRPCQREVSLFSLNLSGCTHYCEE 112
DB 448 PCGSEFLCSVNGLCVACDGVK---DCFWGLDERNCVCRAFT-QCKEIS--TCLSPK 499
QY 113 VEMKRCSCAPRYKLGDDLIQHPAVKPCQRPKMKKEKSHLK-----RTE 160
DB 500 V-----CDGQPPCLNLSDEDCQEGV--PGTFTFQCE-DRSCVKKPNQCDGRPDCKG 552
QY 161 DE-----DQVDPRLIDKRTKTRGDSFMQVVLDSKKKLAQCAVLHESWVLTAAHMD 214
DB 553 DEHDCDGLQGPSSKRVGAVSSSEWPMQ--ASLQVRGHHICGALLADRWITTAHCFQ 611
QY 215 ESKKLVLVGLGEYDNR-WE--ELDLDIKEVFNHVNYSKSTINDALLHLAQPATL 269

DB 612 EDMSASTVLMTVFLQKWNQNSRNPGEVSFKYSRLILHPYHEDSHDYDALLQDHPVVR 671

QY 270 SQITVPCIPDSGLARELINAQGETILVTGNGYHSERKEAKRNPPLANFIKIPVPPHN 329

DB 672 SAAVRPVCLP-----ARSHFFEPGLHWTIGWK--ALBEGPISN--ALQRTVQQLRPQ 722

QY 330 ECEWMSNMVSENMLCAGIIGDRDACEGDSGGPMVA-SFHGTWELVGLVSGGCGLLH 388

DB 723 LCSEAVRYQVTPRMLCAGYRKGRKQKACGDSGGPLVCKALSGRWFAGLWVSGGGRPN 782

QY 389 NYGVYTKVSRVLDWT 403
DB 783 YFGVYTRITGVISWT 797

RESULT 104

US-09-978-191A-169
Sequence 169, Application US/09978191A

Publication No. US20030050239A1
GENERAL INFORMATION:

APPLICANT: Ashkenazi, Avi
APPLICANT: Baker Kevin P.
APPLICANT: Botstein, David
APPLICANT: Deemoyers, Luc
APPLICANT: Baton, Dan
APPLICANT: Ferrara, Napoleon
APPLICANT: Filvaroff, Ellen
APPLICANT: Fong, Sherman
APPLICANT: Gao, Wei-Qiang
APPLICANT: Gerber, Hanspeter
APPLICANT: Grimaldi, J. Christopher
APPLICANT: Goddard, Audrey
APPLICANT: Grimaldi, J. Christopher
APPLICANT: Gurney, Austin L.
APPLICANT: Hillan, Kenneth J.
APPLICANT: Kijavlin, Ivar J.
APPLICANT: Kuo, Sophia S.
APPLICANT: Napier, Mary A.
APPLICANT: Pan, James
APPLICANT: Paoni, Nicholas F.
APPLICANT: Roy, Margaret Ann
APPLICANT: Shelton, David L.
APPLICANT: Stewart, Timothy A.
APPLICANT: Tumas, Daniel
APPLICANT: Williams, P. Mickey
APPLICANT: Wood, William I.
TITLE OF INVENTION: Secreted and Transmembrane Polypeptides and Nucleic
TITLE OF INVENTION: Acids Encoding the Same
FILE REFERENCE: P2630P1C4
CURRENT APPLICATION NUMBER: US/09/978,191A
CURRENT FILING DATE: 2001-10-15
Prior Application removed - See File Wrapper or Palm
SEQ ID NO 169
LENGTH: 802
TYPE: PRT
ORGANISM: Homo sapiens
US-09-978-191A-169

Query Match	20.2%; Score 470; DB 10; Length 802;
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Best Local Similarity 33.1%; Pred. No. 2,5e-31;
Matches 124; Conservative 52; Mismatches 145; Indels 54; Gaps 18;

QY 58 PDA--LCGHGTCT--DGTGSPCDSRGWEGRPQREVSFLNGLDGGCTHYCLEE 112
DB 448 PCGPFELCVNGLCVACDGVK---DOPNGLDERNCVCRATF QCKEDS---TGISLPK 499
QY 113 VGMRCGSAFCGYKGLDGLDCHPAKPCGRPKMKREKRSKLT-----RDTE 160
DB 500 V----CDGQPCNLNSDEDCOGEV--PCGTFFPQCE--DRSCVKKRPQCDGRPCCKRGS 552
QY 161 DDE-----DQVTPRLIDGKMTNRGDSFPOVVLIDSKKKLAAGVLIHPSVLTAHAMD 214
DB 553 DEHDODGLQGPSSRIYGVAGVSSBEEMPMQ--ASLQVRGHHICGGLADRWVITAHCFQ 611
QY 215 ESKKLIVLGEYDLR--W--EELDPIKEVFPVHVSSTTDNLIHLAOPRL 269
DB 612 EDSMASTVLTWTFVLGKWNQNSRMPDEVSFKVSRLLHPHEDSHDYVALQDLPVVR 671
QY 270 SQTVPICLPDPSGLAEERLNONGQETLVTGWSRSREKAKRRFTVLIPIVDPVN 329
DB 672 SAARPVCLP---AKSHFPEGLHCWITMG--ALREGPISTN---ALQKDVVLIDQD 722
QY 330 ECGEWSNMVSENNLCAGLIGRDACBDSGGPMVA--SFHGTWFLVGLVSGEGGGLIH 388
DB 723 LCGEAYRYQVTPRLTGKRYKCKDACCQDSGGPLVCKALSGRMFLAGLVSMGLGCRPN 782
QY 389 NGVYTKYSRLDWT 403
DB 783 YFGVYTRITGVISWT 797

RESULT 105

US-09-978-403A-169
; Sequence 169, Application US/09978403A
; Publication No. US20030050240A1
; GENERAL INFORMATION:
; APPLICANT: Ashkenazi, Avi
; APPLICANT: Baker Kevin P.
; APPLICANT: Botstein, David
; APPLICANT: Desnoyers, Luc
; APPLICANT: Eaton, Dan
; APPLICANT: Ferrara, Napoleon
; APPLICANT: Filvaroff, Ellen
; APPLICANT: Fong, Sherman
; APPLICANT: Geo, Wei-Qiang
; APPLICANT: Gerber, Hanspeter
; APPLICANT: Gerltzen, Mary E.
; APPLICANT: Goddard, Audrey
; APPLICANT: Godowski, Paul J.
; APPLICANT: Grimaldi, J. Christopher
; APPLICANT: Gurney, Austin L.
; APPLICANT: Hillan, Kenneth J.
; APPLICANT: Kijavain, Ivar J.
; APPLICANT: Kuo, Sophia S.
; APPLICANT: Napier, Mary A.
; APPLICANT: Pan, James;
; APPLICANT: Paoni, Nicholas F.
; APPLICANT: Roy, Margaret Ann
; APPLICANT: Shelton, David L.
; APPLICANT: Stewart, Timothy A.
; APPLICANT: Tumas, Daniel
; APPLICANT: Williams, P. Mickey
; APPLICANT: Wood, William I.
TITLE OF INVENTION: Secreted and Transmembrane Polypeptides and Nucleic
FILE OF INVENTION: Acts Encoding the Same
FILE REFERENCE: P2630PIC17
CURRENT APPLICATION NUMBER: US/09/978,403A
PRIOR FILING DATE: 2002-03-19
PRIOR APPLICATION NUMBER: 09/918565
PRIOR FILING DATE: 2001-07-30
PRIOR APPLICATION NUMBER: 60/062250
PRIOR FILING DATE: 1997-10-17

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 PRIOR FILING DATE: 1998-05-15
 PRIOR APPLICATION NUMBER: 60/085704
 PRIOR FILING DATE: 1998-05-15
 PRIOR APPLICATION NUMBER: 60/085697

Query Match 20.2%; Score 470; DB 10; Length 802;
 Best Local Similarity 33.1%; Pred. No. 2.5e-31;
 Matches 124; Conservative 52; Mismatches 145; Indels 54; Gaps 18

QY 58 PCAS--LCCHGTCT--DGISFSCDCSGSWGFGQREYVSLNCSLDNGGCHYCLE 112
 DB 448 PCGHEFLCSYVNGLCVACDGVK----DQNGGIDERNCCVCRATF-QCKEDS--TCISLPR 499
 QY 113 VQWRRCSCGAPGYLGDLDLQCHPAVKPCGPRPMKMEKKSHLK-----RDTE 160
 DB 500 V----CDGQPDCLNCSDEBQCOBEV--PCGTTFPCF-DSCYKRNPCQGRPDCKDS 552
 QY 161 DQE-----DQVDPRLIDKRTRGDSFWQVLLDSKKLACAGVLIHPSVYLPANCMD 214
 DB 553 DEHDGCGLGQPSRRVGAIVSSEGWPMQ-ASLQVRGRHICGGLIADRWITPAACFO 611
 QY 215 ESKKLIRLSEYDLR-WE-KM--ELDDIKEYVHNYSKSTNDTALHIAOPATL 269
 DB 612 EDSMASTVLTWTFLEKWNQSNKPGGVSVKSLHLEHYHEBSHDYDALLQDHPVVR 671
 QY 270 SCTVPICLPDSGLARELNQAGQETLVTCGWYHSRKEKAKRRTFVNLFIKVPVEN 329
 DB 672 SAAYRVPCLF---ASHRFEEGLHCWITGNG-ALRFGCPISN--ALQKVDVOLLIPQD 722
 QY 330 ECEYVNSMNSMSEMYLCAGLIGRQDACEGNSGGMVNA-SHGCTWELVGVSGECCGLH 388
 DB 723 LCESEAVRYQVTPRMLCAGRKCKDAQDGGSPVLCALSGRWFAGLIVSGLCGRFN 782
 QY 389 NGVYTKVRYLDMV 403
 DB 783 YFGEVYRITGVISWI 797

RESULT 106
 US-09-978-564A-169
 Sequence 169, Application us/09978564A
 Publication No. US20030050241A1
 GENERAL INFORMATION:
 APPLICANT: Ashkenazi, Avi
 APPLICANT: Baker, Kevin P.
 APPLICANT: Botstein, David
 APPLICANT: Desnoyers, Luc
 APPLICANT: Eaton, Dan
 APPLICANT: Ferrara, Napoleon
 APPLICANT: Filvarolf, Ellen
 APPLICANT: Fonzy, Sherman
 APPLICANT: Gao, Wei-Qiang
 APPLICANT: Gerber, Hanspeter
 APPLICANT: Gerlitsen, Mary E.
 APPLICANT: Goddard, Audrey
 APPLICANT: Godowski, Paul J.
 APPLICANT: Grimaldi, J. Christopher
 APPLICANT: Gunney, Austin L.
 APPLICANT: Hillan, Kenneth J.
 APPLICANT: Kijavlin, Ivar J.
 APPLICANT: Kuo, Sophia S.
 APPLICANT: Napier, Mary A.

APPLICANT: Pan, James
APPLICANT: Bao, Nicholas F.
APPLICANT: Roy, Margaret Ann
APPLICANT: Shelton, David L.
APPLICANT: Stewart, Timothy A.
APPLICANT: Tumas, Daniel
APPLICANT: Williams, P. Mickey
APPLICANT: Wood, William I.
TITLE OF INVENTION: Secreted and Transmembrane Polypeptides and Nucleic
FILE REFERENCE: P2630PIC25
CURRENT APPLICATION NUMBER: US/09/978,564A
CURRENT FILING DATE: 2001-10-16
PRIOR APPLICATION NUMBER: 09/918585
PRIOR FILING DATE: 2001-07-30
PRIOR APPLICATION NUMBER: 60/062250
PRIOR FILING DATE: 1997-10-17
PRIOR APPLICATION NUMBER: 60/064249
PRIOR FILING DATE: 1997-11-03
PRIOR APPLICATION NUMBER: 60/065311
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PRIOR APPLICATION NUMBER: 60/077641
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PRIOR APPLICATION NUMBER: 60/077791
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PRIOR APPLICATION NUMBER: 60/079656
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PRIOR FILING DATE: 1998-05-15
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PRIOR FILING DATE: 1998-05-15
PRIOR APPLICATION NUMBER: 60/085697

Query Match 20.2%; Score 470; DB 10; Length 802;
Best Local Similarity 33.1%; Pred. No. 2, 5e-31;

Matches 124; Conservative 52; Mismatches 145; Indels 54; Gaps 18;

QY 58 PCAS--LCCHGTCT--DGTGSPDCDRSGMGRFCQREVSFLNGLDNGGCTYCEE 112
DB 448 PCGEPLCSVGLCVPCACDGVK---DTPGJLDERNCVCRAIF-QCKEDS--TCLSLPK 499
QY 113 VGMWRSCAPGYKGLDGLLQCHPAVKPCGRPMKMKRSHLK-----RPLE 160
DB 500 V-----CDGQPCDLNGSDEBCCQEGV--PCGTFFPQCE--DRSCVKKPMQCDGRPDGDS 552
QY 161 DQJ-----DQVDPRLIDGKTRRGDSWQVVLDSKSLAGAVLHPWUTTAHCHD 214
DB 553 DEHDCDCIQQPSSSRIVGAVSSEBEMPMQ--ASLQVGRHITCGALTAERWVITAAHCQ 611
QY 215 ESKKLLVRLGEYDLR--WE--ELDLIDKEVYFVPMYSKSTTDNDIALHLAQPATL 269
DB 612 EDGMASTVLTWTFLEKRWQNSRPFGEVFKYSRLHLHPHEEDSHDYVALLQDHPVVR 671
QY 270 SQTIVPICLPDSGLAERELNQAQETLVITGWHSSREKAKRNTFYVLFIXIPVPHN 329
DB 672 SAARVVC.P---ARSHFPEGLHCWITGNG--ALREBGPISN---ALQVYVOLIPDD 722
QY 330 ECGEWMNNVSENLCAGLIGDRQACEDSDGGPMVA--SHGHWFLVLSWMBGGGLH 388
DB 723 LCSEAVRYGVTPMLCGAYRGRKQACQSDGGGLVCKALSGWFLAGLVSWGLDGRPN 782
QY 389 NYGVYTKVSRYLDMT 403
DB 783 YFGYTRITRGVLSW 797

RESULT 107

US-09-999-833A-169
Sequence 169, Application US/0999833A
Publication No US20030054405A1
GENERAL INFORMATION:
APPLICANT: Ashkenazi, Avi
APPLICANT: Baker Kevin P.

APPLICANT: Botstein, David
APPLICANT: Deeneyers, Inc
APPLICANT: Eaton, Dan
APPLICANT: Ferrara, Napoleon
APPLICANT: Filvaroff, Ellen
APPLICANT: Fong, Sherman
APPLICANT: Gao, Wei-Qiang
APPLICANT: Gerber, Hanspeter
APPLICANT: Gerritsen, Mary E.
APPLICANT: Goddard, Audrey
APPLICANT: Godowski, Paul J.
APPLICANT: Grimaldi, U. Christopher
APPLICANT: Guiney, Austin L.
APPLICANT: Hillan, Kenneth J.
APPLICANT: Kliaivin, Ivar J.
APPLICANT: Kuo, Sophia S.
APPLICANT: Napier, Mary A.
APPLICANT: Pan, James
APPLICANT: Paoni, Nicholas F.
APPLICANT: Roy, Margaret Ann
APPLICANT: Shelton, David L.
APPLICANT: Stewart, Timothy A.
APPLICANT: Thomas, Daniel
APPLICANT: Williams, P. Mickey
APPLICANT: Wood, William I.
TITLE OF INVENTION: Secreted and Transmembrane Polypeptides and Nucleic
FILE REFERENCE: P2630P1C65
CURRENT APPLICATION NUMBER: US/09/999,833A
CURRENT FILING DATE: 2001-10-24
PRIOR APPLICATION NUMBER: 09/918585
PRIOR FILING DATE: 2001-07-30
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PRIOR APPLICATION NUMBER: 60/079689
PRIOR FILING DATE: 1998-03-27
PRIOR APPLICATION NUMBER: 60/079653
PRIOR FILING DATE: 1998-03-27
PRIOR APPLICATION NUMBER: 60/079728
PRIOR FILING DATE: 1998-03-27
PRIOR APPLICATION NUMBER: 60/079786

PRIOR FILING DATE: 1998-03-27
PRIOR APPLICATION NUMBER: 60/079920
PRIOR FILING DATE: 1998-03-30
PRIOR APPLICATION NUMBER: 60/079923
PRIOR FILING DATE: 1998-03-30
PRIOR APPLICATION NUMBER: 60/080105
PRIOR FILING DATE: 1998-03-31
PRIOR APPLICATION NUMBER: 60/080107
PRIOR FILING DATE: 1998-03-31
PRIOR APPLICATION NUMBER: 60/080165
PRIOR FILING DATE: 1998-03-31
PRIOR APPLICATION NUMBER: 60/080194
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PRIOR APPLICATION NUMBER: 60/083545
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PRIOR APPLICATION NUMBER: 60/083558
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PRIOR APPLICATION NUMBER: 60/083559
PRIOR FILING DATE: 1998-04-29
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PRIOR FILING DATE: 1998-04-29
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PRIOR FILING DATE: 1998-05-06
PRIOR APPLICATION NUMBER: 60/084441
PRIOR FILING DATE: 1998-05-06
PRIOR APPLICATION NUMBER: 60/084637
PRIOR FILING DATE: 1998-05-07
PRIOR APPLICATION NUMBER: 60/084639
PRIOR FILING DATE: 1998-05-07
PRIOR APPLICATION NUMBER: 60/084640
PRIOR FILING DATE: 1998-05-07
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PRIOR FILING DATE: 1998-05-07
PRIOR APPLICATION NUMBER: 60/084600
PRIOR FILING DATE: 1998-05-07
PRIOR APPLICATION NUMBER: 60/084627
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PRIOR APPLICATION NUMBER: 60/084643
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PRIOR APPLICATION NUMBER: 60/085339
PRIOR FILING DATE: 1998-05-13
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PRIOR FILING DATE: 1998-05-15
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PRIOR FILING DATE: 1998-05-15
PRIOR APPLICATION NUMBER: 60/085689
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PRIOR APPLICATION NUMBER: 60/085580
PRIOR FILING DATE: 1998-05-15
PRIOR APPLICATION NUMBER: 60/085573
PRIOR FILING DATE: 1998-05-15
PRIOR APPLICATION NUMBER: 60/085704
PRIOR FILING DATE: 1998-05-15
PRIOR APPLICATION NUMBER: 60/085697

Query Match 20.2%; Score 470; DB 10; Length 802;
Best Local Similarity 33.1%; Pred. No. 2,5e-31;
Matches 124; Conservative 52; Mismatches 145; Indels 54; Gaps 18;

58 PCAS--LCCGCTCI--DQISFSCDRCSGMGRFCQREVSFLNCSLNDGCTHYCUE 112
448 PCGEFLTSVGLCPVACDGVK---DCPNGLDERNCVCAIF-QCDEDS---TCISLPK 499
113 VGRRCSCAPGKXLDLQCHPAVKPCGRPWKMKRSHK-----RDE 160
500 V---CDGPPCLNLSDEBQCGGV--PCGTFPOE--DRSCVKKPNCQDGRPDRCDS 552
161 DQE-----DOYDRLIDGKMTREDSFWQVLLDSKKLACGAVLHPGWTLLAHQMD 214
553 DEEHCDGLOGPSSRIYGAIVSSEGEWQ--ASLQVRGHHICGALLADRWITLAAHCQ 611
215 ESKKLVRLGEYDLRR--KW--ELDIDKEVFVHPNYSKSTTDMIDIALHLAOPATL 269
612 EDMSASTVMTWELAKWQNSRMPGVSRYKSRLLHPHEBDSHDYVALQLDHPVVR 671
270 SQTIVPICLPDSGLAERELNQAQGETLVYTGWGHSSSEKAKRNTVPLNFKIPVPEPN 329
672 SAAVRPVCJP---ARSHFEFGIHCWITGNG--ALRBGGPISN--ALQKRVQVLIPOD 722

QY 330 ECSEVMNMTSEMLCAGILRODACEGSGEPNVA-SFHGTFLVGNMGGCGGLH 388
DB 723 LCSEAYRYQVTPMLCAGRKRCDCQ3DS3GPLVCKALSGRFLAGLWSWGLGCRPN 782
QY 389 NYGVYTVSRYLDMT 403
DB 783 YFGVYTRITGVISMT 797

RESULT 108
US-09-981-915A-169
Sequence 169, Application US/09981915A
Publication No. US20030054986A1
GENERAL INFORMATION:
APPLICANT: Ashkenazi, Avi
APPLICANT: Baker Kevin P.
APPLICANT: Botstein, David
APPLICANT: Desnoyers, Luc
APPLICANT: Eaton, Dan
APPLICANT: Ferrara, Napoleon
APPLICANT: Filvaroff, Ellen
APPLICANT: Fong, Sherman
APPLICANT: Gao, Wei-Qiang
APPLICANT: Gerber, Hanspeter
APPLICANT: Gertsen, Mary E.
APPLICANT: Goddard, Audrey
APPLICANT: Grimaldi, J. Christopher
APPLICANT: Gurney, Austin L.
APPLICANT: Hillan, Kenneth J.
APPLICANT: KJavin, Ivar J.
APPLICANT: Kuo, Sophia S.
APPLICANT: Napier, Mary A.
APPLICANT: Pan, James
APPLICANT: Paoni, Nicholas F.
APPLICANT: Roy, Margaret Ann
APPLICANT: Shelton, David L.
APPLICANT: Stewart, Timothy A.
APPLICANT: Tumas, Daniel
APPLICANT: Williams, P. Mickey
APPLICANT: Wood, William I.
TITLE OF INVENTION: Secreted and Transmembrane Polypeptides and Nucleic
FILE REFERENCE: P2630P1C12
CURRENT APPLICATION NUMBER: US/09/981,915A
PRIOR APPLICATION NUMBER: 09/918585
PRIOR FILING DATE: 2001-07-30
PRIOR APPLICATION NUMBER: 60/062250
PRIOR FILING DATE: 1997-10-17
PRIOR APPLICATION NUMBER: 60/064249
PRIOR FILING DATE: 1997-11-03
PRIOR APPLICATION NUMBER: 60/065311
PRIOR FILING DATE: 1997-11-13
PRIOR APPLICATION NUMBER: 60/066364
PRIOR FILING DATE: 1997-11-21
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PRIOR FILING DATE: 1998-03-10
PRIOR APPLICATION NUMBER: 60/077632
PRIOR FILING DATE: 1998-03-11
PRIOR APPLICATION NUMBER: 60/077641
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PRIOR APPLICATION NUMBER: 60/077649
PRIOR FILING DATE: 1998-03-11
PRIOR APPLICATION NUMBER: 60/077791
PRIOR FILING DATE: 1998-03-12
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PRIOR FILING DATE: 1998-03-13
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PRIOR FILING DATE: 1998-05-15
PRIOR APPLICATION NUMBER: 60/085573
PRIOR FILING DATE: 1998-05-15
PRIOR APPLICATION NUMBER: 60/085704
PRIOR FILING DATE: 1998-05-15
PRIOR APPLICATION NUMBER: 60/085697

Query Match 20.2%; Score 470; DB 10; Length 802;

Best Local Similarity 33.1%; Pred. No. 2.5e-31;
Matches 124; Conservative 52; Mismatches 145; Indels 54; Gaps 18;

QY 58 PCAS--LCCHGTCT---DGTGSSCDGSGMGEFGCCRRVSLFSLNSLNGCHCYLCE 112

Db 448 PCGEFLCSVNGLCVPACDGVK----DCPNGJDERNCVRATF--OCKEDS---TCISLPR 499
QY 113 VGNRRSCAPGKYAGDLDQCHPAYKPCGRPMKBMKKRSLK-----RDTE 160
Db 500 V-----CDGQPDCLNGSDEBQCGEV--PCGFTTQCE--DRSCYKPEPNCQDGRDGRDS 552
QY 161 DOE-----DQVDPRLIDGMRTERGDSPMQVLLDSKKKLAGAVLIHPSVLTAAHCMD 214
Db 553 DEHICOGGLQGPSSRIYGAVSSESEWPMQ--ASLQVAGRHICGALIDRNVITTAHCQ 611
QY 215 ESKKLVRLGEYDLR--WE--KM--ELDDIKFVFPVFNYSKSTTDNIALHLAQPAIT 269
Db 612 EDMSASTVMTVFLGKWNQSRMPGEVSFKVRLIHPYHEEDSHVDVALLQDHEVVR 671
QY 270 SQITVPIPCDGLAERELNAGQETLVGMGYSRSREKAKNRTFYLNPIKIPVFNH 329
Db 672 SAAYRVPCLP-----ARSHFFEPGLHCMTQNG--ALMBGPIIN--ALQVAVDVLIRQD 722
QY 330 ECSEVMSNMVSENMLCAGIIGDRDACBDSGCPMVA--SHGTWFLVGLVSNKSGCGLLH 388
Db 723 LCSEAVRYQVTPRMLCAGYRKXKDCACQDSGSLVCKALSGWFLAGLVSGGCGRPN 782
QY 389 NYGYTKVSRVLDNI 403
Db 783 YFGVYTRITGVISWI 797

RESULT 109
US-09-978-824-169
Sequence 169, Application US/9978824
Publication No. US2003005216A1
GENERAL INFORMATION:
APPLICANT: Ashkenazi, Avi
APPLICANT: Baker Kevin P.
APPLICANT: Botstein, David
APPLICANT: Deemeyer, Luc
APPLICANT: Bacon, Dan
APPLICANT: Perrara, Napoleon
APPLICANT: Filvaroff, Ellen
APPLICANT: Pong, Sherman
APPLICANT: Gao, Wei-Qiang
APPLICANT: Gerber, Hanspeter
APPLICANT: Gerltsen, Mary E.
APPLICANT: Goddard, Audrey
APPLICANT: Godowski, Paul J.
APPLICANT: Grimaldi, J. Christopher
APPLICANT: Gurney, Austin L.
APPLICANT: Hillan, Kenneth J.
APPLICANT: Kilavoin, Ivar J.
APPLICANT: Kuo, Sophia S.
APPLICANT: Napier, Mary A.
APPLICANT: Pan, James J.
APPLICANT: Paoni, Nicholas F.
APPLICANT: Roy, Margaret Ann
APPLICANT: Shelton, David L.
APPLICANT: Stewart, Timothy A.
APPLICANT: Tunas, Daniel
APPLICANT: Williams, P. Mickey
APPLICANT: Wood, William I.
TITLE OR INVENTION: Secreted and Transmembrane Polypeptides and Nucleic
FILE REFERENCE: P2630P1C14
CURRENT APPLICATION NUMBER: US/09/978, 824
CURRENT FILING DATE: 2001-10-17
PRIOR APPLICATION NUMBER: 09/918585
PRIOR FILING DATE: 2001-07-30
PRIOR APPLICATION NUMBER: 60/062250
PRIOR FILING DATE: 1997-10-17
PRIOR APPLICATION NUMBER: 60/064249
PRIOR FILING DATE: 1997-11-03
PRIOR APPLICATION NUMBER: 60/065311
PRIOR FILING DATE: 1997-11-13
PRIOR APPLICATION NUMBER: 60/066364

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2	PRIOR APPLICATION NUMBER: 60/077450	2	PRIOR FILING DATE: 1998-04-15
3	PRIOR FILING DATE: 1998-03-10	3	PRIOR APPLICATION NUMBER: 60/081838
4	PRIOR APPLICATION NUMBER: 60/077632	4	PRIOR FILING DATE: 1998-04-15
5	PRIOR FILING DATE: 1998-03-11	5	PRIOR APPLICATION NUMBER: 60/082568
6	PRIOR APPLICATION NUMBER: 60/077641	6	PRIOR FILING DATE: 1998-04-21
7	PRIOR FILING DATE: 1998-03-11	7	PRIOR APPLICATION NUMBER: 60/082569
8	PRIOR APPLICATION NUMBER: 60/077649	8	PRIOR FILING DATE: 1998-04-21
9	PRIOR FILING DATE: 1998-03-11	9	PRIOR APPLICATION NUMBER: 60/082704
10	PRIOR APPLICATION NUMBER: 60/077791	10	PRIOR FILING DATE: 1998-04-22
11	PRIOR FILING DATE: 1998-03-12	11	PRIOR APPLICATION NUMBER: 60/082804
12	PRIOR APPLICATION NUMBER: 60/078004	12	PRIOR FILING DATE: 1998-04-22
13	PRIOR FILING DATE: 1998-03-13	13	PRIOR APPLICATION NUMBER: 60/082700
14	PRIOR APPLICATION NUMBER: 60/078886	14	PRIOR FILING DATE: 1998-04-22
15	PRIOR FILING DATE: 1998-03-20	15	PRIOR APPLICATION NUMBER: 60/082797
16	PRIOR APPLICATION NUMBER: 60/078936	16	PRIOR FILING DATE: 1998-04-22
17	PRIOR FILING DATE: 1998-03-20	17	PRIOR APPLICATION NUMBER: 60/082796
18	PRIOR APPLICATION NUMBER: 60/078910	18	PRIOR FILING DATE: 1998-04-23
19	PRIOR FILING DATE: 1998-03-20	19	PRIOR APPLICATION NUMBER: 60/083336
20	PRIOR APPLICATION NUMBER: 60/078939	20	PRIOR FILING DATE: 1998-04-27
21	PRIOR FILING DATE: 1998-03-20	21	PRIOR APPLICATION NUMBER: 60/083322
22	PRIOR APPLICATION NUMBER: 60/079294	22	PRIOR FILING DATE: 1998-04-28
23	PRIOR FILING DATE: 1998-03-25	23	PRIOR APPLICATION NUMBER: 60/083392
24	PRIOR APPLICATION NUMBER: 60/079656	24	PRIOR FILING DATE: 1998-04-29
25	PRIOR FILING DATE: 1998-03-26	25	PRIOR APPLICATION NUMBER: 60/083495
26	PRIOR APPLICATION NUMBER: 60/079664	26	PRIOR FILING DATE: 1998-04-29
27	PRIOR FILING DATE: 1998-03-27	27	PRIOR APPLICATION NUMBER: 60/083496
28	PRIOR APPLICATION NUMBER: 60/079689	28	PRIOR FILING DATE: 1998-04-29
29	PRIOR FILING DATE: 1998-03-27	29	PRIOR APPLICATION NUMBER: 60/083459
30	PRIOR APPLICATION NUMBER: 60/079663	30	PRIOR FILING DATE: 1998-04-29
31	PRIOR FILING DATE: 1998-03-27	31	PRIOR APPLICATION NUMBER: 60/083554
32	PRIOR APPLICATION NUMBER: 60/079728	32	PRIOR FILING DATE: 1998-04-29
33	PRIOR FILING DATE: 1998-03-27	33	PRIOR APPLICATION NUMBER: 60/083558
34	PRIOR APPLICATION NUMBER: 60/079786	34	PRIOR FILING DATE: 1998-04-29
35	PRIOR FILING DATE: 1998-03-27	35	PRIOR APPLICATION NUMBER: 60/083559
36	PRIOR APPLICATION NUMBER: 60/079920	36	PRIOR FILING DATE: 1998-04-29
37	PRIOR FILING DATE: 1998-03-30	37	PRIOR APPLICATION NUMBER: 60/083500
38	PRIOR APPLICATION NUMBER: 60/079923	38	PRIOR FILING DATE: 1998-04-29
39	PRIOR FILING DATE: 1998-03-30	39	PRIOR APPLICATION NUMBER: 60/083742
40	PRIOR APPLICATION NUMBER: 60/080105	40	PRIOR FILING DATE: 1998-04-30
41	PRIOR FILING DATE: 1998-03-31	41	PRIOR APPLICATION NUMBER: 60/084366
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43	PRIOR FILING DATE: 1998-03-31	43	PRIOR APPLICATION NUMBER: 60/084414
44	PRIOR APPLICATION NUMBER: 60/080165	44	PRIOR FILING DATE: 1998-05-06
45	PRIOR FILING DATE: 1998-03-31	45	PRIOR APPLICATION NUMBER: 60/084441
46	PRIOR APPLICATION NUMBER: 60/080194	46	PRIOR FILING DATE: 1998-05-06
47	PRIOR FILING DATE: 1998-03-31	47	PRIOR APPLICATION NUMBER: 60/084637
48	PRIOR APPLICATION NUMBER: 60/080327	48	PRIOR FILING DATE: 1998-05-07
49	PRIOR FILING DATE: 1998-04-01	49	PRIOR APPLICATION NUMBER: 60/084639
50	PRIOR APPLICATION NUMBER: 60/080328	50	PRIOR FILING DATE: 1998-05-07
51	PRIOR FILING DATE: 1998-04-01	51	PRIOR APPLICATION NUMBER: 60/084640
52	PRIOR APPLICATION NUMBER: 60/080333	52	PRIOR FILING DATE: 1998-05-07
53	PRIOR FILING DATE: 1998-04-01	53	PRIOR APPLICATION NUMBER: 60/084588
54	PRIOR APPLICATION NUMBER: 60/080334	54	PRIOR FILING DATE: 1998-05-07
55	PRIOR FILING DATE: 1998-04-01	55	PRIOR APPLICATION NUMBER: 60/084600
56	PRIOR APPLICATION NUMBER: 60/081070	56	PRIOR FILING DATE: 1998-05-07
57	PRIOR FILING DATE: 1998-04-08	57	PRIOR APPLICATION NUMBER: 60/084627
58	PRIOR APPLICATION NUMBER: 60/081049	58	PRIOR FILING DATE: 1998-05-07
59	PRIOR FILING DATE: 1998-04-08	59	PRIOR APPLICATION NUMBER: 60/085339
60	PRIOR APPLICATION NUMBER: 60/081071	60	PRIOR FILING DATE: 1998-05-13
61	PRIOR FILING DATE: 1998-04-08	61	PRIOR APPLICATION NUMBER: 60/085338
62	PRIOR APPLICATION NUMBER: 60/081195	62	PRIOR FILING DATE: 1998-05-13
63	PRIOR FILING DATE: 1998-04-08	63	PRIOR APPLICATION NUMBER: 60/085322
64	PRIOR APPLICATION NUMBER: 60/081203	64	PRIOR FILING DATE: 1998-05-13
65	PRIOR FILING DATE: 1998-04-09	65	PRIOR APPLICATION NUMBER: 60/085582
66	PRIOR APPLICATION NUMBER: 60/081229	66	PRIOR FILING DATE: 1998-05-15
67	PRIOR FILING DATE: 1998-04-09	67	PRIOR APPLICATION NUMBER: 60/085700
68	PRIOR APPLICATION NUMBER: 60/081955	68	PRIOR FILING DATE: 1998-05-15
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PRIOR FILING DATE: 1998-05-15
PRIOR APPLICATION NUMBER: 60/085579
PRIOR FILING DATE: 1998-05-15
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PRIOR FILING DATE: 1998-05-15
PRIOR APPLICATION NUMBER: 60/085573
PRIOR FILING DATE: 1998-05-15
PRIOR APPLICATION NUMBER: 60/085704
PRIOR FILING DATE: 1998-05-15
PRIOR APPLICATION NUMBER: 60/085697

Query Match 20.2%; Score 470; DB 10; Length 802;
Best Local Similarity 33.1%; Pred. No. 2,5e-31;
Matches 124; Conservative 52; Mismatches 145; Indels 54; Gaps 16;

QY 58 PCAS--LCGCHGTCT---DEIGSFSCDCRSMEGRFCQREVSFLNCSLMDSGCTHYCLEE 112
DB 448 PCGEPLCSVNGLCVPAACGVK---DCENGLDERNCVCRAVF--CKEKDS---TCISLPK 499
QY 113 VGMRRSCAPGYKIGDILLQCHAVYFCGKPMKMKKSHLK-----RDTE 160
DB 500 V---CDGQPDCLNGSDECCQEGV--PGGFTTQCE--DRSCVKRPFQCDGPRDCKDS 552
QY 161 DOE-----DQVDEPLIDGKQTRRGDSPQVUILLDSKKLACGAVLIHPSVWLTAAHCMD 214
DB 553 DEHCDCGGLQGPSSRIYGAIVSSEGEWFWQ--ASLQVGRHICGALIDRWVITAAHCFQ 611
QY 215 ESKKLIVRLGSDYDLR--WE--KW--ELDIDKEVFPHPNYSKTTDNDIALHLAQPATL 269
DB 612 EDMSASTVMTVFLGKWKQNSRWPGEVSPKYSRLIHPYHEEDSHDYVALLQIDHPVVR 671
QY 270 SCITVPICLPDSGLAREPLNNGOFTLVNGGVSHSREKAKRNTFVNLPIKVPVPHN 329
DB 672 SAAVRPVCIP---ARSHFPEGLHCWTWKG--ALBEGSPISN---ALQVYDQILPQD 722
QY 330 ECSEVMNWNYSNMICAGIIGDRQDA CEGDS GGPVVA--SFHGTFPLVGVSWMBGCGGLAH 388
DB 723 LCSEARVQVTRMLCAGYRKKKKDCGDSGGLVCKALSGMFLAAGVSMGLGCGRPV 782
QY 389 NYGVYTKVSRKYLDMT 403
DB 783 YFGVYTRITGVISWI 797

RESULT 110
US-09-918-585A-169
Sequence 169, Application US/09918585A
Publication No. US20030060406a1
GENERAL INFORMATION:
APPLICANT: Ashkenazi, Avi
APPLICANT: Baker Kevin P.
APPLICANT: Botstein, David
APPLICANT: Desnoyers, Luc
APPLICANT: Eaton, Dan
APPLICANT: Ferrara, Napoleon
APPLICANT: Filvaroff, Ellen
APPLICANT: Fong, Sherman
APPLICANT: Gao, Wei-Qiang
APPLICANT: Gerber, Hanspeter
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APPLICANT: Pan, James
APPLICANT: Paoni, Nicholas F.
APPLICANT: Roy, Margaret Ann
APPLICANT: Shelton, David L.
APPLICANT: Stewart, Timothy A.

APPLICANT: Tamas, Daniel
APPLICANT: Williams, P. Mickey
APPLICANT: Wood, William I.
TITLE OF INVENTION: Secreted and Transmembrane Polypeptides and Nucleic
TITLE OF INVENTION: Acids Encoding the Same
FILE REFERENCE: P2630P1C1
CURRENT APPLICATION NUMBER: US/09/918,585A
CURRENT FILING DATE: 2001-07-30
PRIOR APPLICATION NUMBER: 60/062250
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 PRIOR APPLICATION NUMBER: 60/086023

Query Match 20.2%; Score 470; DB 10; Length 802;
 Best Local Similarity 33.1%; Pred. No. 2.5e-31;
 Matches 124; Conservative 52; Mismatches 145; Indels 54; Gaps 18;

QY 58 PCAS--LCGHGTCT---DGISSFCDCRSQWGRFCQREVSFLNCSLNDGGCTHYCLEE 112
 DB 448 FCGEFLCSYNGLCVPCGQV---DCPNGLDERNCVGRATF--QCKBDS---TCISLFX 499
 QY 113 VGRKSCAPGKLGDDLLQCHPAYKPCGPKKREKRSILX-----RDTE 160
 DB 500 V---CDGQPDCLNGSDDECCQEGV--PCGTFYFQCE--DRSCVKKPNQCDSPDRBDS 552
 QY 161 DOE-----DQVDPRLLDGKMTGRGSPQVVLDSKKILAGAVLHPNSVLTAAHND 214
 DB 553 DEHCCGCGGSPSSRTVIGAVSSEGEWNO--ASIQVGRHICGALLIDRWVITAHCRQ 611
 QY 215 ESKKLVRLGEYDLR--WE--ELDDIKEVFNPNVSYSTTNDIALHLAOPAL 269
 DB 612 EDGASTVMTVFLGKWQNSRWPGEVSFKVSRLLHFYHEEDSHDYVALQLDHPVVR 671
 QY 270 SQTIVPICIPDSGLAERLQAQETVLTGNGCHSSREKAKRNTFYLNFKIPVVPNN 329
 DB 672 SAAVRPCLP---RSHFPEFGHCTTGWG--ALRBGGPISN---ALQVTVQLIPD 722
 QY 330 ECSEFWSNNVSEMLCAGILGRQDACESGDSGKPMVA--SPHGTWFLVGLVSWEGCGGLH 388
 DB 723 LCSAIVRYVYTRMLCAGYKXKKKDAQGDSSGFLVCKALSGWFLAGVSWGLGCGRBN 782
 QY 389 NYGVYTVKSRVYDWT 403
 DB 783 YFGYTRITGVISWI 797
 RESULT 111
 US-09-978-423A-169
 ; Sequence 169, Application US/0978423A
 ; Publication No. US20030069178A1
 ; GENERAL INFORMATION:
 ; APPLICANT: Ashkenazi, Avi
 ; APPLICANT: Baker, Kevin P.
 ; APPLICANT: Botstein, David
 ; APPLICANT: Desnoyers, Luc
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APPLICANT: Shelton, David L.
APPLICANT: Stewart, Timothy A.
APPLICANT: Tumas, Daniel
APPLICANT: Williams, P. Mickey
APPLICANT: Wood, William I.
TITLE OF INVENTION: Secreted and Transmembrane Polypeptides and Nucleic
FILE REFERENCE: P2630PIC21
CURRENT APPLICATION NUMBER: US/09/978,423A
PRIOR FILING DATE: 2002-05-16
PRIOR APPLICATION NUMBER: 09/918585
PRIOR FILING DATE: 2001-07-30
PRIOR APPLICATION NUMBER: 60/062250
PRIOR FILING DATE: 1997-10-17
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PRIOR APPLICATION NUMBER: 60/085697

Query Match 20.2%; Score 470; DB 10; Length 802;
Best Local Similarity 33.4%; Pred. No. 2.5e-31;
Matches 124; Conservative 52; Mismatches 145; Indels 54; Gaps 18;

QY 58 PCAS--LCCHGTCT--DQISFSCDCRSGWEGFQCREVSVFLNCSLDNGGCTHYCEE 112
DB 448 PCGPELCSVAGLCVPRACGVK---DCPNGLDERNCVCRAVF-QCKEDS---TCTSLPK 499
QY 113 VGNRCSAPGKLGDDLLQCHPAKFCGPKMKREKRSILK-----RDE 160
DB 500 V---CDGQPDCLNGSDDECCQEGV--PGTFTFOCE-DRSCVKKPNQDGGEDCRGS 552
QY 161 DOE-----DQVDELLDGMTRRGSPMQUVLLDSKKLACGAVLHPSWVLTAAHAMD 214
DB 553 DEEHDCGLOQSPSRIVGAVSBESEBEMWQ-ASIQVRGCHITCGALLDNRVITAHGQ 611
QY 215 ESKKLVLGEYDLR-WE--ELDLDIKEVFVHNPYSSTTDNDIALHLAOPATL 269
DB 612 EDSMASTVLTWFLGKWKVQNSRWPCEVSFKVSRLLHPYABEDSHDYVALLDQDFPVVR 671
QY 270 SQTIVPICPDGSLAEFLNQAQETLVVGCHSSBEKAKRNTFTLNFITKIPVPPN 329
DB 672 SAIVRVCIP---ASHFPEGLHGWITGNG--ALREGGPSLN---ALQVNDVQULIPD 722
QY 330 ESEVSNVSNVSENLKAGIILDRQACBEGSDSGCHMYA-SPHGTNFWGLVSWGEGGLH 388
DB 723 LGSBAIVRYQVTPKMLCGHYRKKKKQACQSDSGFLVCKALSGWFWLAGVSWGLGSGGRN 782

QY 389 NYGVYTKVSRVLDWI 403
DB 783 YGVYTRITNGVTSWI 797
RESULT 112
US-09-978-193A-169
; Sequence 169, Application US/09978193A
; Publication No. US20030073624A1
; GENERAL INFORMATION:
; APPLICANT: Ashkenazi, Avi
; APPLICANT: Baker Kevin P.
; APPLICANT: Botstein, David
; APPLICANT: Desnoyers, Luc
; APPLICANT: Eaton, Dan
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; APPLICANT: Tumas, Daniel
; APPLICANT: Williams, P. Mickey
; APPLICANT: Wood, William I.
; TITLE OF INVENTION: Secreted and Transmembrane Polypeptides and Nucleic
; FILE REFERENCE: P2630P1C6
; CURRENT APPLICATION NUMBER: US/09/978,193A
; CURRENT FILING DATE: 2002-02-21
; PRIOR APPLICATION NUMBER: 09/918585
; PRIOR FILING DATE: 2001-07-30
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PRIOR FILING DATE: 1998-05-15
PRIOR APPLICATION NUMBER: 60/085704
PRIOR FILING DATE: 1998-05-15
PRIOR APPLICATION NUMBER: 60/085697

Query Match 20.2%; Score 470; DB 10; Length 802;
Best Local Similarity 33.1%; Pred. No. 2, 5e-31;
Matches 124; Conservative 52; Mismatches 145; Indels 54; Gaps 18;

QY 58 PQAS--LCGGHCT---DGISSSCDCRSGWGRCCREVSFLNCSLNGGCTHYCLEE 112
DB 448 PPGSEFLCSVGLCVACGVK---DQWGLDERNCVGRATF-QCKEBS---TGISLPK 499
QY 113 VQMRGSCAPGYKLGSDLLQCHPAVKEPCGRPMKMKKRSKLR-----RDTE 160
DB 500 V-----CDQGPCLANGSDERQCEGV--PCGTTFQCE-DKSCVKKPMPQDGRPCRDGS 552

QY 161 DOE-----DQVDPDLINQKXTRRGDSFPMQVYLLDSKKLACGAVLHPSVTLNACMD 214
D 553 DEHCDCGLQGPSRSRIVGAVSSBGEPMQ-ASLQVGRHICGALINDRWVITAAICQ 611
QY 215 ESKKLVLEGEYDLRR-WE-KW--ELDDIDKEVFPENPKSTNDIALHIAQAPUL 269
D 612 EDNASTVLTWTFVLKQWNSRMFGSVSRLLIHYHEHSDHYDVALLODHYVR 671
QY 270 SQTIVPICLPDSGLERELNOAQETLVTGWSHSSREKAKNRTFVILFKIPVVEAN 329
D 672 SAARFVCLP---ARSHFEPGLHCWITGWC--ALFRGCPISN--ALQKVDVQLPQ 722
QY 330 ECSEVMSNMVSEMLCAGILDRDACEPSGSGPMVA-SFGTWPVLGVMSKGGCGLH 388
D 723 LCSEAYRYQVTPRMCAGRKXKDAQCDSDGPIVCKALSGRMFLAGLWSWGLGCRPN 782
QY 389 NYGYTKVSRYDWM 403
D 783 YFGVYTRITGVISMI 797

RESULT 113

US-09-999-830A-169

Sequence 169, Application US/09999830A

Publication No. US20030077700A1

GENERAL INFORMATION:

APPLICANT: Ashkenazi, Avi

APPLICANT: Baker Kevin P.

APPLICANT: Botstein, David

APPLICANT: Desnoyers, Luc

APPLICANT: Eaton, Dan

APPLICANT: Ferrara, Napoleon

APPLICANT: Filvaroff, Eileen

APPLICANT: Fong, Sherman

APPLICANT: Gao, Wei-Qiang

APPLICANT: Gerber, Hanspeter

APPLICANT: Gerritsen, Mary E.

APPLICANT: Goddard, Audrey J.

APPLICANT: Grimaldi, J. Christopher

APPLICANT: Guirey, Austin L.

APPLICANT: Hillan, Kenneth J.

APPLICANT: Kljavin, Ivar J.

APPLICANT: Kuo, Sophia S.

APPLICANT: Napier, Mary A.

APPLICANT: Pan, James;

APPLICANT: Paoni, Nicholas F.

APPLICANT: Roy, Margaret Ann

APPLICANT: Shelton, David L.

APPLICANT: Stewart, Timothy A.

APPLICANT: Thomas, Daniel

APPLICANT: Williams, P. Mickey

APPLICANT: Wood, William I.

TITLE OF INVENTION: Secreted and Transmembrane Polypeptides and Nucleic

FILE REFERENCE: P26301C70

CURRENT APPLICATION NUMBER: US/09/999,830A

CURRENT FILING DATE: 2001-08-31

PRIOR APPLICATION NUMBER: 09/918585

PRIOR FILING DATE: 2001-07-30

PRIOR APPLICATION NUMBER: 60/062250

PRIOR FILING DATE: 1997-10-17

PRIOR APPLICATION NUMBER: 60/064249

PRIOR FILING DATE: 1997-11-03

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 PRIOR APPLICATION NUMBER: 60/085697

Query Match 20.2%; Score 470; DB 10; Length 802;
 Best Local Similarity 33.1%; Pred. No. 2.5e-31;
 Matches 124; Conservative 52; Mismatches 145; Indels 54; Gaps 18;

QY 58 PCAS--LCGAGTCT---DGTGSGCDRSGMGRFQGEVVFNGCSLDNGGCTHCTC 112
 DB 448 PCGEFFICVNGTLCVPACDGVK---DCPNGLDERNCVCRAFF-QCKEDS---TCTSLER 499
 QY 113 VGNRCSCAPGVKLDLQCHPAVFCQRPWARMKKKSHLK-----RDTE 160
 DB 500 V---CDQPPDCLNGSDEBQCGGV--RCGFTFGQC-DSCVKKRPNQCGRDCDGS 552
 QY 161 DOE-----DQVPLLDGKMTTRGDSFMQVLLDSKKKLCAGVLIHPSVYTLAHQCD 214
 DB 553 DEHICDQGLQGPSSRIYQGAVSSEGEWPMQ-ASLQVRGRHIQSGALLIDRPVITPAHCFQ 611
 QY 215 ESKKLVLKGEYDRLR-WE--KY--ELDLDIKEYFVHPNYSKSTINDIALHLAQPATL 269
 DB 612 EDWASTVLMYVFLGKVMQNSRMPGEVSFVSRLULHPHREEDSHDYVALLQIDHPYR 671
 QY 270 SQTIVPICPDGSLARELNAQGETLVYNGYSSREKAKNRTFYANFIKIPVPER 329
 DB 672 SAARFVPCP-----ARSHFEPRGLHCITGWG--ALREGPISN--ALQKVYDQLIPQD 722
 QY 330 ECSEWMSNWSNMICAGITIGDRQDACEBDSGCPMVA-SHGHWFLVGLVWEGCGILH 388
 DB 723 LCSARVYQVTPRMLCAGYRKCKDACCQDSGSPVCKALSGRMFLAGVSMGLGCGRPN 782
 QY 389 NYGYTYSRYLDWI 403
 DB 783 YFGVYRITGVLSWI 797

RESULT 114 US-09-978-757A-169

Sequence 169, Application US/09978757A
 Publication No. US2003083248A1

GENERAL INFORMATION:
 APPLICANT: Ashkenazi, Avi
 APPLICANT: Baker Kevin P.
 APPLICANT: Botstein, David
 APPLICANT: Demoyere, Luc
 APPLICANT: Eaton, Dan
 APPLICANT: Ferrara, Napoleon
 APPLICANT: Filvaroff, Ellen
 APPLICANT: Fong, Sherman
 APPLICANT: Gao, Wei-Qiang
 APPLICANT: Gerber, Hanspeter
 APPLICANT: Gerlitsen, Mary E.
 APPLICANT: Goddard, Audrey
 APPLICANT: Godowski, Paul J.
 APPLICANT: Grimaldi, J. Christopher
 APPLICANT: Gunney, Austin L.
 APPLICANT: Hillan, Kenneth J.
 APPLICANT: Kijevin, Ivar J.
 APPLICANT: Kuo, Sophia S.
 APPLICANT: Napier, Mary A.
 APPLICANT: Pan, James
 APPLICANT: Paoni, Nicholas F.
 APPLICANT: Roy, Margaret Ann
 APPLICANT: Shelton, David L.
 APPLICANT: Stewart, Timothy A.
 APPLICANT: Tumas, Daniel
 APPLICANT: Williams, P. Mickey
 APPLICANT: Wood, William I.
 TITLE OF INVENTION: Secreted and Transmembrane Polypeptides and Nucleic
 TITLE OF INVENTION: Acids Encoding the Same

FILE REFERENCE: P2630PIC26
CURRENT APPLICATION NUMBER: US/09/978,757A
CURRENT FILING DATE: 2002-03-19
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PRIOR FILING DATE: 2001-07-30
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PRIOR APPLICATION NUMBER: 60/085697

Query Match 20.2%; Score 470; DB 10; Length 802;

Best Local Similarity 33.1%; Pred. No. 2,5e-31;
Matches 124; Conservative 52; Mismatches 145; Indels 54; Gaps 18;

QY 58 PCAS--LCCGHTCI--DQISFSCDRSGMGRFCQREVSFLNCSLMDGCTHYCIE 112
DB 448 PCGEHCSVNGLCVPACDGVK---DCPNGLDERNCVCRATF--QCKEDS---TCISLFX 499
QY 113 VGRKCSAPGYKGLDILQCPAPKPCGCPMKEMKRSUK-----RDPE 160
DB 500 V---CDGQPCDNGSDEECQEGV--PCGFTTPOCB--DRSCVKNPDCDGRPDGDS 552
QY 161 DOE-----DQVDPRLDGMTRRGPSPQVVLDSKKLACGAVLHPMVLTAAHCD 214
DB 553 DEHCDCGCGIOPSSRISVIGAVSEBGMWQ--ASLQVRGHHIGGMLIDRNVITAAHCQ 611
QY 215 ESKKLAVLGEYDRLR--WE--KW--ELDDIKVFNHVSSTDDNDIALHLAPATL 269
DB 612 EDNASTVLMVFLGKRWQMSRWPGEVSFKYSRLILPYHEDSDHYVALLDLHPVVR 671
QY 270 SQTIVPICPDSGLAEELNQAQETLVGSGYSSSEKAKRNTFVLNFKLPVAPBN 329
DB 672 SAARVPCP---ARSHFEPGLHCWITGK--ALRGGPISN---ALQNVQILIPD 722
QY 330 ECEVSNMVSNNMLCAGILGRDACEGDSQGPVVA--SPHGTWFLVGLVSWGEGCGLH 388
DB 723 LCEBAVRYQVTPRMICAGYRKGGKACCGDSGFLVKALSGRWFAGLVSMGLGCGRPN 782
QY 389 NYGVYTKVSRYLDMT 403
DB 783 YFGVYTRITGVISWI 797

RESULT 115

US-09-978-169

Sequence 169, Application US/09978187B

Publication No. US20030096744A1

GENERAL INFORMATION:

APPLICANT: Ashkenazi, Avi
APPLICANT: Baker Kevin P.
APPLICANT: Botstein, David
APPLICANT: Deenoyers, David
APPLICANT: Eaton, Dan
APPLICANT: Ferrara, Napoleon
APPLICANT: Filvaroff, Ellen
APPLICANT: Fong, Sherman
APPLICANT: Gao, Wei-Qiang
APPLICANT: Gerber, Hanspeter
APPLICANT: Gerlitsen, Mary E.
APPLICANT: Goddard, Audrey

APPLICANT: Godowski, Paul J.
APPLICANT: Grimaldi, J. Christopher
APPLICANT: Gurney, Austin L.
APPLICANT: Hillan, Kenneth J.
APPLICANT: Kijavlin, Ivar J.
APPLICANT: Kuo, Sophia S.
APPLICANT: Napier, Mary A.
APPLICANT: Pan, James
APPLICANT: Peoni, Nicholas F.
APPLICANT: Roy, Margaret Ann
APPLICANT: Shelton, David U.
APPLICANT: Stewart, Timothy A.
APPLICANT: Tumas, Daniel
APPLICANT: Williams, P. Mickey
APPLICANT: Wood, William I.
TITLE OF INVENTION: Secreted and Transmembrane Polypeptides and Nucleic
FILE REFERENCE: P2630PICS
CURRENT APPLICATION NUMBER: US/09/978,187B
CURRENT FILING DATE: 2001-10-15
PRIOR APPLICATION NUMBER: 09/918585
PRIOR FILING DATE: 2001-07-30
PRIOR APPLICATION NUMBER: 60/062250
PRIOR FILING DATE: 1997-10-17
PRIOR APPLICATION NUMBER: 60/064249
PRIOR FILING DATE: 1997-11-03
PRIOR APPLICATION NUMBER: 60/065311
PRIOR FILING DATE: 1997-11-13
PRIOR APPLICATION NUMBER: 60/066364
PRIOR FILING DATE: 1997-11-21
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PRIOR APPLICATION NUMBER: 60/080105
PRIOR FILING DATE: 1998-03-31
PRIOR APPLICATION NUMBER: 60/080107
PRIOR FILING DATE: 1998-03-31
PRIOR APPLICATION NUMBER: 60/080165

1 PRIOR APPLICATION NUMBER: 60/084414
2 PRIOR FILING DATE: 1998-05-06
3 PRIOR APPLICATION NUMBER: 60/084441
4 PRIOR FILING DATE: 1998-05-06
5 PRIOR APPLICATION NUMBER: 60/084637
6 PRIOR FILING DATE: 1998-05-07
7 PRIOR APPLICATION NUMBER: 60/084639
8 PRIOR FILING DATE: 1998-05-07
9 PRIOR APPLICATION NUMBER: 60/084640
10 PRIOR FILING DATE: 1998-05-07
11 PRIOR APPLICATION NUMBER: 60/084598
12 PRIOR FILING DATE: 1998-05-07
13 PRIOR APPLICATION NUMBER: 60/084600
14 PRIOR FILING DATE: 1998-05-07
15 PRIOR APPLICATION NUMBER: 60/084627
16 PRIOR FILING DATE: 1998-05-07
17 PRIOR APPLICATION NUMBER: 60/084643
18 PRIOR FILING DATE: 1998-05-07
19 PRIOR APPLICATION NUMBER: 60/085339
20 PRIOR FILING DATE: 1998-05-13
21 PRIOR APPLICATION NUMBER: 60/085338
22 PRIOR FILING DATE: 1998-05-13
23 PRIOR APPLICATION NUMBER: 60/085323
24 PRIOR FILING DATE: 1998-05-13
25 PRIOR APPLICATION NUMBER: 60/085482
26 PRIOR FILING DATE: 1998-05-15
27 PRIOR APPLICATION NUMBER: 60/085700
28 PRIOR FILING DATE: 1998-05-15
29 PRIOR APPLICATION NUMBER: 60/085689
30 PRIOR FILING DATE: 1998-05-15
31 PRIOR APPLICATION NUMBER: 60/085579
32 PRIOR FILING DATE: 1998-05-15
33 PRIOR APPLICATION NUMBER: 60/085580
34 PRIOR FILING DATE: 1998-05-15
35 PRIOR APPLICATION NUMBER: 60/085573
36 PRIOR FILING DATE: 1998-05-15
37 PRIOR APPLICATION NUMBER: 60/085704
38 PRIOR FILING DATE: 1998-05-15
39 PRIOR APPLICATION NUMBER: 60/085597

	Query Match	20.4%	Score 470;	DB 10;	Length 802;	
	Query Similarity	33.1%	Pred. No. 2.5e-31;			
	Best Local					
	Matches 124;	Conservative	55;	Mismatches 145;	Indels 54;	Gaps 18
Qy	58	PCAS-LCCGHTCI---DGISFSCDRSGMGRFCQREVSFLNGLSLMGCGTHYGLAE	112			
Dp	448	PCPEEFLGCVNGLCPVACDVK---DCEPGLDERCVCRATF-QCKEDS---TCISLKP	499			
Qy	113	VGMRCSCAPGKLGADLLCHPAVKFECRPFKMKKKRSHLK-----EDTE	160			
Dp	500	V-----CHGPEDLNSDEBCCQBGV--PCGTFPGQD--DRSCVKKPQCQDGRPDCDGS	552			
Qy	161	DQE-----DQDPRLLDGMTRRGRDSNQVYLLDSKKLACGAVLHNSWLTAAHOMD	214			
Dp	553	DEEHCDGGLQGPSSRIYGAVASSEGBMWQ-ASLDVRGHNHCQGLATLRWYTLAHQFO	611			
Qy	215	ESKTLVRLGEYDER-WR-KW-ELDLDIKEVFNHMYSKSTTNDIALHLAAQATL	269			
Dp	612	EDMSASTVLTMYFLKQWQMSRPBVSFKYSRLHLHPHEDSHDYVALLDLHPVVR	671			
Qy	270	SGTVPLCLPDSGLAERELNQAGQELTYTGCHSSREKAKRKRTVNLFIKIIVAPHN	329			
Dp	672	SAVAEPCLP---ARSHFEFGLHMTWTGG--ALREGPISN--ALQKDVOLLQD	722			
Qy	330	ECSEVMNVSNNMLCAGLIGDQACEBDSGGSPVA-SFHGTWFLGLVSWBSCGLH	388			
Dp	723	LCSEHMYQVTPMTCAQYRKRGKDKCCQDGBGVCKALSRNFLGLVSWELCGGRN	782			
Qy	389	NYGVYTKVSRYLDWI	403			
Dp	783	YGVYTRITGVISWI	797			

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RESULT 116
US-09-978-643A-169
; Sequence 169, Application US/09978643A
; Publication No. US20030104998A1
; GENERAL INFORMATION:
; APPLICANT: Ashkenazi, Avi
; APPLICANT: Baker Kevin P.
; APPLICANT: Botstein, David
; APPLICANT: Desnoyers, Luc
; APPLICANT: Eaton, Dan
; APPLICANT: Ferrara, Napoleon
; APPLICANT: Filvaroff, Ellen
; APPLICANT: Fong, Sherman
; APPLICANT: Gao, Wei-Qiang
; APPLICANT: Gerber, Hanspeter
; APPLICANT: Gerritsen, Mary E.
; APPLICANT: Goddard, Audrey
; APPLICANT: Grimaldi, J. Christopher
; APPLICANT: Gurney, Austin L.
; APPLICANT: Hillan, Kenneth J.
; APPLICANT: Kljavin, Ivar J.
; APPLICANT: Kuo, Sophia S.
; APPLICANT: Napier, Mary A.
; APPLICANT: Pan, James
; APPLICANT: Paoni, Nicholas F.
; APPLICANT: Roy, Margaret Ann
; APPLICANT: Shelton, David L.
; APPLICANT: Stewart, Timothy A.
; APPLICANT: Tumas, Daniel
; APPLICANT: Williams, P. Mickey
; APPLICANT: Wood, William I.
; TITLE OF INVENTION: Secreted and Transmembrane Polypeptides and Nucleic
; FILE OF INVENTION: Acids Encoding the Same
; FILE REFERENCE: P2630P1C16
; CURRENT APPLICATION NUMBER: US/09/978,643A
; CURRENT FILING DATE: 2001-10-16
; NUMBER OF SEQ ID NOS: 624
; Prior Application removed - See File Wrapper or Palm
; SEQ ID NO 169
; LENGTH: 802
; TYPE: PRT
; ORGANISM: Homo sapiens
US-09-978-643A-169

Query Match          20.2%; Score 470; DB 10; Length 802;
Best Local Similarity 33.1%; Pred. No. 2.5e-31;
Matches 124; Conservative 52; Mismatches 145; Indels 54; Gaps 18;

QY 58 PCAS--LCCHGTCT---DGISSFCDCRSGMGRFCQREVSFLNGLDNGGCTHYCEE 112
DB 448 PCPEFLCSVNLGVCPACDGVK---DCPNGLDERNCVCRAFP--QCKEDS---TCISLPK 499
QY 113 VQMRRCSCAPYKLGDDLLQCHPAVKFPCGRPMKMEKKRSHLK-----RDTE 160
DB 500 V-----CDQPDCLNGSDERCOQEGV--PCSTFTFQCE--DRSCVKKPNQCDGRPCDDGS 552
QY 161 DOE-----DQVDRLLDGRKMTRRGDSFQWVLLDSKKKLAAGAVLHPSWVTLTAACMD 214
DB 553 DEHDCGGLQSPSSRIYGAIVSSEGEPMQ--ASLQVRGRNHCGGALLADRWVITTAHCFQ 611
QY 215 ESKKLVRIGBYDLR--WE--KW--ELDLIDKEVFNHPYVSKSTINDIALHIAQPATL 269
DB 612 EDSMASTVMTVFLGKWNQNSRMPGEVSFVSLHHPYHEDSHDYDVALLDHPVVR 671
QY 270 SQTIVPICLPDSGLARELNQAGETLVYTGWGHSSRREKARNRTFVNLFIKIPVPEHN 329
DB 672 SAAYRVCPLP-----ARSHFPERGLHWITGNG--ALRGGPISN---ALQKVDVQILPOD 722
QY 330 EGSVWMSNMVSEMKCAGILGRDQACRGSQGPMTA--SFHGTFLVGLVMSGECGLH 388
DB 723 LGSAYRYQYTPMILCAGTRKKGKDACGSDSGSLVCKALSGRWFAGLVSGWGLCGGRPN 782

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QY 389 NGVYTKVSRYLDMI 403
DB 783 YRGVYTRIRIGVISWI 797

RESULT 117
US-09-978-375A-169
; Sequence 169, Application US/09978375A
; Publication No. US20030130181A1
; GENERAL INFORMATION:
; APPLICANT: Ashkenazi, Avi
; APPLICANT: Baker Kevin P.
; APPLICANT: Botstein, David
; APPLICANT: Desnoyers, Luc
; APPLICANT: Eaton, Dan
; APPLICANT: Ferrara, Napoleon
; APPLICANT: Filvaroff, Ellen
; APPLICANT: Fong, Sherman
; APPLICANT: Gao, Wei-Qiang
; APPLICANT: Gerber, Hanspeter
; APPLICANT: Gerritsen, Mary E.
; APPLICANT: Goddard, Audrey
; APPLICANT: Grimaldi, J. Christopher
; APPLICANT: Gurney, Austin L.
; APPLICANT: Hillan, Kenneth J.
; APPLICANT: Kljavin, Ivar J.
; APPLICANT: Kuo, Sophia S.
; APPLICANT: Napier, Mary A.
; APPLICANT: Pan, James
; APPLICANT: Paoni, Nicholas F.
; APPLICANT: Roy, Margaret Ann
; APPLICANT: Shelton, David L.
; APPLICANT: Stewart, Timothy A.
; APPLICANT: Tumas, Daniel
; APPLICANT: Williams, P. Mickey
; APPLICANT: Wood, William I.
; TITLE OF INVENTION: Secreted and Transmembrane Polypeptides and Nucleic
; FILE OF INVENTION: Acids Encoding the Same
; FILE REFERENCE: P2630P1C24
; CURRENT APPLICATION NUMBER: US/09/978,375A
; CURRENT FILING DATE: 2002-04-19
; Prior Application removed - See File Wrapper or Palm
; SEQ ID NO 169
; LENGTH: 802
; TYPE: PRT
; ORGANISM: Homo sapiens
US-09-978-375A-169

Query Match          20.2%; Score 470; DB 10; Length 802;
Best Local Similarity 33.1%; Pred. No. 2.5e-31;
Matches 124; Conservative 52; Mismatches 145; Indels 54; Gaps 18;

QY 58 PCAS--LCCHGTCT---DGISSFCDCRSGMGRFCQREVSFLNGLDNGGCTHYCEE 112
DB 448 PCPEFLCSVNLGVCPACDGVK---DCPNGLDERNCVCRAFP--QCKEDS---TCISLPK 499
QY 113 VQMRRCSCAPYKLGDDLLQCHPAVKFPCGRPMKMEKKRSHLK-----RDTE 160
DB 500 V-----CDQPDCLNGSDERCOQEGV--PCSTFTFQCE--DRSCVKKPNQCDGRPCDDGS 552
QY 161 DOE-----DQVDRLLDGRKMTRRGDSFQWVLLDSKKKLAAGAVLHPSWVTLTAACMD 214
DB 553 DEHDCGGLQSPSSRIYGAIVSSEGEPMQ--ASLQVRGRNHCGGALLADRWVITTAHCFQ 611
QY 215 ESKKLVRIGBYDLR--WE--KW--ELDLIDKEVFNHPYVSKSTINDIALHIAQPATL 269
DB 612 EDSMASTVMTVFLGKWNQNSRMPGEVSFVSLHHPYHEDSHDYDVALLDHPVVR 671
QY 270 SQTIVPICLPDSGLARELNQAGETLVYTGWGHSSRREKARNRTFVNLFIKIPVPEHN 329
DB 672 SAAYRVCPLP-----ARSHFPERGLHWITGNG--ALRGGPISN---ALQKVDVQILPOD 722

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QY 330 ECSEWMSNTSENMICAGLILDRDADCEGDSGCEPMVA-SFHGTWELVGNMGBGGLH 388
Db 723 LCSEAYRYQVTPRMCAGRKRGKDACQDBSGPLWCKALSGMFLAGLWSMGLGCRPW 782
QY 389 NYGYTVVSRYLDMI 403
Db 783 YFGYTVITGVISMT 797

RESULT 118
US-09-978-298A-169
Sequence 169, Application US/09978298A
GENERAL INFORMATION:
APPLICANT: Ashkenazi, Avi
APPLICANT: Baker Kevin P.
APPLICANT: Botstein, David
APPLICANT: Desnoyers, Luc
APPLICANT: Eaton, Dan
APPLICANT: Ferrata, Napoleon
APPLICANT: Filvarioff, Ellen
APPLICANT: Fong, Sherman
APPLICANT: Gao, Wei-Qiang
APPLICANT: Gerber, Hanspeter
APPLICANT: Gerlisen, Mary E.
APPLICANT: Goddard, Audrey J.
APPLICANT: Grimaldi, J. Christopher
APPLICANT: Guiney, Austin L.
APPLICANT: Hillan, Kenneth J.
APPLICANT: Kliaivin, Ivar J.
APPLICANT: Kuo, Sophia S.
APPLICANT: Napier, Mary A.
APPLICANT: Pan, James
APPLICANT: Paoni, Nicholas F.
APPLICANT: Roy, Margaret Ann
APPLICANT: Shelton, David L.
APPLICANT: Stewart, Timothy A.
APPLICANT: Tunes, Daniel
APPLICANT: Williams, P. Mickey
APPLICANT: Wood, William I.
TITLE OF INVENTION: Secreted and Transmembrane Polypeptides and Nucleic
FILE REFERENCE: P2630P1C2
CURRENT APPLICATION NUMBER: US/09/978,298A
PRIOR FILING DATE: 2001-10-15
PRIOR APPLICATION NUMBER: 09/918585
PRIOR FILING DATE: 2001-07-30
PRIOR APPLICATION NUMBER: 60/062250
PRIOR FILING DATE: 1997-10-17
PRIOR APPLICATION NUMBER: 60/064249
PRIOR FILING DATE: 1997-11-03
PRIOR APPLICATION NUMBER: 60/065311
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PRIOR FILING DATE: 1998-03-10
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PRIOR FILING DATE: 1998-03-13
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PRIOR FILING DATE: 1998-03-20
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PRIOR FILING DATE: 1998-03-20

PRIOR APPLICATION NUMBER: 60/078910
PRIOR FILING DATE: 1998-03-20
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PRIOR FILING DATE: 1998-03-25
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PRIOR FILING DATE: 1998-03-26
PRIOR APPLICATION NUMBER: 60/079664
PRIOR FILING DATE: 1998-03-27
PRIOR APPLICATION NUMBER: 60/079689
PRIOR FILING DATE: 1998-03-27
PRIOR APPLICATION NUMBER: 60/079663
PRIOR FILING DATE: 1998-03-27
PRIOR APPLICATION NUMBER: 60/079728
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PRIOR APPLICATION NUMBER: 60/084627
PRIOR FILING DATE: 1998-05-07
PRIOR APPLICATION NUMBER: 60/084643
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PRIOR FILING DATE: 1998-05-15
PRIOR APPLICATION NUMBER: 60/085700
PRIOR FILING DATE: 1998-05-15
PRIOR APPLICATION NUMBER: 60/085689
PRIOR FILING DATE: 1998-05-15
PRIOR APPLICATION NUMBER: 60/085579
PRIOR FILING DATE: 1998-05-15
PRIOR APPLICATION NUMBER: 60/085580
PRIOR FILING DATE: 1998-05-15
PRIOR APPLICATION NUMBER: 60/085573
PRIOR FILING DATE: 1998-05-15
PRIOR APPLICATION NUMBER: 60/085704
PRIOR FILING DATE: 1998-05-15
PRIOR APPLICATION NUMBER: 60/085697

Query Match 20.2%; Score 470; DB 10; Length 802;

Best Local Similarity 33.1%; Pred. No. 2.5e-31;

Matches 124; Conservative 52; Mismatches 145; Indels 54; Gaps 18;

QY 58 PCAS--LCGCHGTCT--DGTGSSCDGSGWGRFCQREVSFLNSLUNGCHYCEE 112

DB 448 PCGEFLCSVNGLCVPACDGVK---DCPNGLDERNCVCRATF-QCKEDS---TCISLPK 499
QY 113 VGRNRSCAPETKIGSDLDLQCHPAYKEPCGRPMKEKRSHTK-----RDTE 160
DB 500 V-----CDQPPCLNGSDEBQCGGV--PCGTFTPQCB-DRCVYKRNQCDGRPDGDS 552
QY 161 DQE-----DQVDPRLIDGMTRGDSFMQVLLDSKKIACGAVALHPNSVLTAAACND 214
DB 553 DEBHCOCGLQGPSSRIYIGVASBSEWPMQ-ASLQVRGHHIGGALLADRVVITAAHCQ 611
QY 215 ESKKLLVRLGEYDTR-WE--KW--ELDLDTKEVFPNYSSTNDNLIALHQAQATL 269
DB 612 EDMSASTVLTMTVFGKQWQNSRWPGBVSFKYSRIILHPYHEDSHDYVALLQDHPVVR 671
QY 270 SQITVPICLPDSGLAERELNOAGETLVYGMGYHSSEKAKRNTFYATIKLIPVPER 329
DB 672 SAAYRVPCLP-----ARSHFEPDLHWITWG--ALREGGPLSN---ALQGVQVQLIPQD 722
QY 330 ECSEVSNMVSSENMICAGILGDRQACGDSGGMVA-SFHGTWPLVGLVWGGCGLH 388
DB 723 LCEAVRYQVTEPRMLCAGYRKCKACGDSGGLVCKALSGRWFAGLVSMGLGCGREN 782
QY 389 NYGYTKVSRITDNT 403
DB 783 YFGYTRITGVISWT 797
RESULT 119
US-09-978-188A-169
Sequence 169, Application US/09978188A
Publication No. US20030139328A1
GENERAL INFORMATION:
APPLICANT: Ashkenazi, Avi
APPLICANT: Baker Kevin P.
APPLICANT: Bostein, David
APPLICANT: Deanoyers, Luc
APPLICANT: Eaton, Dan
APPLICANT: Ferrara, Napoleon
APPLICANT: Filvaroff, Ellen
APPLICANT: Fong, Sherman
APPLICANT: Geo, Wei-Qiang
APPLICANT: Gerber, Hanspeter
APPLICANT: Gerritsen, Mary E.
APPLICANT: Goddard, Audrey
APPLICANT: Godowski, Paul J.
APPLICANT: Grimaldi, J. Christopher
APPLICANT: Gurney, Austin L.
APPLICANT: Hillan, Kenneth J.
APPLICANT: Kijavini, Ivar J.
APPLICANT: Kuo, Sophia S.
APPLICANT: Napier, Mary A.
APPLICANT: Pan, James;
APPLICANT: Paoni, Nicholas F.
APPLICANT: Roy, Margaret Ann
APPLICANT: Shelton, David L.
APPLICANT: Stewart, Timothy A.
APPLICANT: Tumas, Daniel
APPLICANT: Williams, P. Mickey
APPLICANT: Wood, William I.
TITLE OR INVENTION: Secreted and Transmembrane Polypeptides and Nucleic
TITLE OR INVENTION: Acids Encoding the Same
FILE REFERENCE: P2630P1C8
CURRENT APPLICATION NUMBER: US/09/978,188A
CURRENT FILING DATE: 2001-10-15
PRIOR APPLICATION NUMBER: 09/918585
PRIOR FILING DATE: 2001-07-30
PRIOR APPLICATION NUMBER: 60/062250
PRIOR FILING DATE: 1997-10-17
PRIOR APPLICATION NUMBER: 60/064249
PRIOR FILING DATE: 1997-11-03
PRIOR APPLICATION NUMBER: 60/065311
PRIOR FILING DATE: 1997-11-13
PRIOR APPLICATION NUMBER: 60/066364

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; PRIOR APPLICATION NUMBER: 60/085704
; PRIOR FILING DATE: 1998-05-15
; PRIOR APPLICATION NUMBER: 60/085697

Query Match      20.2%; Score 470; DB 10; Length 802;
Best Local Similarity 33.1%; Pred. No. 2 Se-11;
Matches 124; Conservative 52; Mismatches 145; Indels 54; Gaps 18;

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QY 113 VGNKRCSCAPGKGLDILLOCTHPAYKFCGSPKMKRMEKRSHTLK-----RDE 160
DB 500 V---CDGQPCDCLNGSDECCQEGV--FCGTFTFOCE-DRSCVKKPNQCDGRPDGRDS 552
QY 161 DOE-----DQVDPRLDGMTRRGDSEPMQVVLIDSKKLLACAVLHPSMVLTAACMD 214
DB 553 DEHCCCGGLQSPSSRIYGAVSSEGEWQV-ASQVGRGHITCGALLADMRVITAAHCRQ 611
QY 215 ESKKLLVRLGEYDLR-WE--KW--ELDLIKEYVHPNYSKSTQNDIALHLAOPATL 269
DB 612 EDSMASTVLMVFLGKVMQNSRWPGBVSFKYSRLILHPYHEEDSHDYVALLDLDPVVR 671
QY 270 SQIVTICLPDSCGLAEHLNQAQGVLYTMGSGYSSREKARNTFLNFKIPVPHN 329
DB 672 SAAYRVCPLP---ARSHFEPGLHWTGNG--ALREGPSLN---ALQKVDVQLIPD 722
QY 330 ECEWWSNMVSENMICAGILGRDACEGSGCPHVA-SPHGTWFLVGVSMGSGGLH 388
DB 723 LCSEAYRYQVTRMLCAGYKRGKAKACQDSGGFLVCKALSGRWFLAIVSMGLGGRN 782
QY 389 NYGVYTKVSRYLDMT 403
DB 783 YFGVYTRITGVISWT 797

RESULT 120
US-09-978-681A-169
; Sequence 169, Application US/0978681A
; Publication No. US20030195148A1
GENERAL INFORMATION:
; APPLICANT: Ashkenazi, Avi
; APPLICANT: Baker Kevin P.
; APPLICANT: Botstein, David
; APPLICANT: Deemoyers, Luc
; APPLICANT: Eaton, Dan
; APPLICANT: Ferrara, Napoleom
; APPLICANT: Filvaroff, Ellen
; APPLICANT: Fong, Sherman
; APPLICANT: Gao, Wei-Qiang
; APPLICANT: Gerber, Hanspeter
; APPLICANT: Gerritsen, Mary E.
; APPLICANT: Goddard, Audrey
; APPLICANT: Godowski, Paul J.
; APPLICANT: Grimaldi, J. Christopher
; APPLICANT: Gunney, Austin L.
; APPLICANT: Hillan, Kenneth J.
; APPLICANT: Kljavin, Ivar J.
; APPLICANT: Kuo, Sophia S.
; APPLICANT: Napier, Mary A.
; APPLICANT: Pan, James
; APPLICANT: Paoni, Nicholas F.
; APPLICANT: Roy, Margaret Ann
; APPLICANT: Shelton, David L.
; APPLICANT: Stewart, Timothy A.
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; APPLICANT: Tumas, Daniel
; APPLICANT: Williams, P. Mickey
; TITLE OF INVENTION: Secreted and Transmembrane Polypeptides and Nucleic
; FILE REFERENCE: P2630PIC18
; CURRENT APPLICATION NUMBER: US/09/978,681A
; CURRENT FILING DATE: 2002-03-19
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PRIOR APPLICATION NUMBER: 60/085704
PRIOR FILING DATE: 1998-05-15
PRIOR APPLICATION NUMBER: 60/085697

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Query Match 20 2%; Score 470; DB 10; Length 802;
Best local similarity 33.1%; Pred. No. 2.5e-11;
Matches 124; Conservative 52; Mismatches 145; Indels 54; Gaps 10;

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QY 58 PCAS--LCGGHGTCT--DQISFSCDRCSGMGRFCQREVSFLNCSLDNGCTHYCLEE 112
DB 448 PCGGFGLCSVNGLCVPCDCVK---DCPNGLDERNCVGRAT--TCISLPK 499
QY 113 VGRGSCAPGKLGDDLLQCHPAVKFCGPKKREKRSHTK-----RDIE 160
DB 500 V---CDGQPDCLNGSDERCCQBGV--PCGTFPQCE--DRSCVKKPNQCDGRPRDRDS 552
QY 161 DQF-----DQVDRLLDKMTRRGDSPMQVLLDSKKLACGALIHPSVWLTAAACMD 214
DB 553 DEHDCDQIGFSSRITGVGVSSBGEWNO--ASIQVGHGICGALLIDRWVITAAHCQ 611
QY 215 ESKKLVRLGEYDLR--WE--ELDLDKEVFVHPNYSSTTDNDIALHLAOPAL 269
DB 612 EDMSATVAVTYFLGKWNQSRMPGEVSPKVSRLILHPYHEEDSHDYVALQLDHPVVR 671
QY 270 SCITVPLCPDSGLAEREINQAQETLYTNGYHSSREKAKRNTFTFLNFKIPVVEN 329
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QY 330 ECSPWNNVSNMTCAGIIGDRQDACBGDSGQPMVA--SPHGTFWVGLVSWBEGCGLH 388
DB 723 LCSAIVRYQVTFPRMLCAGYRKGRKKDCQDSGFLVCALSGWFLAGVSWGLGCGRPN 782
QY 389 NYGVYTKVSRYLDMT 403
DB 783 YFGVYTRITGVISMT 797

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RESULT 121
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; Publication No. US2003019533A1
; GENERAL INFORMATION:
; APPLICANT: Ashkenazi, Avi
; APPLICANT: Baker, Kevin P.
; APPLICANT: Botstein, David
; APPLICANT: Desnoyers, Luc
; APPLICANT: Eaton, Dan
; APPLICANT: Ferrara, Napoleon
; APPLICANT: Filvaroff, Ellen

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APPLICANT: Peng, Sherman
APPLICANT: Gao, Wei-Qiang
APPLICANT: Gerber, Hanspeter
APPLICANT: Gerritsen, Mary E.
APPLICANT: Goddard, Audrey
APPLICANT: Godowski, Paul J.
APPLICANT: Grimaldi, J. Christopher
APPLICANT: Gurney, Austin L.
APPLICANT: Hillan, Kenneth J.
APPLICANT: Kljavin, Ivar J.
APPLICANT: Kuo, Sophia S.
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APPLICANT: Pan, James
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APPLICANT: Shelton, David L.
APPLICANT: Stewart, Timothy A.
APPLICANT: Tumas, Daniel
APPLICANT: Williams, P. Mickey
APPLICANT: Wood, William I.
TITLE OF INVENTION: Secreted and Transmembrane Polypeptides and Nucleic
FILE REFERENCE: P2630PIC10
CURRENT APPLICATION NUMBER: US/09/978,194A
CURRENT FILING DATE: 2001-10-15
PRIOR APPLICATION NUMBER: 09/918585
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Query Match 20.2%; Score 470; DB 10; Length 802;
Best Local Similarity 33.1%; Pred. No. 2.5e-31;
Matches 124; Conservative 52; Mismatches 145; Indels 54; Gaps 18;

QY 58 PCAS--LCCGHTC--DGTGFSQDCRSQWEGFPCQREVSFLNCSLDNGGCTHYCLEE 112
DB 448 PCGEGFLCSVAGLCVPAQGVK---DCPNGLDERNCVCRAIF-QCKEDS---TCISLPK 499
QY 113 VGNRSCAPGYKAGDDLLQCHPAVYPCGPRWKEKRSHLK-----RDTE 160
DB 500 V-----CDGQPDCLNGSDEQCQGV--PCGTFPQCE-DRCVKKPNQDCGRPDCRDS 552
QY 161 DOE-----DQVDFRLDGMKTRRSDSPWQVLLDSKKLACGAVLIHPSVTLTAACMD 214
DB 553 DEEHCDGCLQGPSSRTVGAWSSEGEPMWQ-ASLQVGRHITCGALIDRVNVTIAACFQ 611
QY 215 ESKKLVRAGEYDLR--WE--KW--ELDDIKEYFVHPNYSKSTDDNDIALHLAOPATL 269
DB 612 EDSMASTVLTWTFGLKWNQNSRWPBESFVSRLLHPHYEEDSHDYVALLQDHPVVR 671
QY 270 SQTIVPCLPDSGLAERLNOAQETLVYTGWGHSSSEKAKRNTFTVNLFIKIPVPHN 329
DB 672 SAAVRPVCPL---ARSHFEPGLHGWITGWG--ALREGGPIISN---ALQKVDVQLIPD 722
QY 330 ECEVSNWVSENMICAGILGRDACEGSGGPMVA-SFHGTFVLGVYSMGEGCGLIH 388
DB 723 LCEFAHYGVYTPRMILCASGRKKKQACGDSGGPVLKALMSRWTLAQLVSMGLGCGRN 782

QY 389 NGVYTKVSRYLDMI 403
DB 783 YGVYTRITGVISMI 797

RESULT 122
US-09-999-829A-169

Sequence 169, Application US/09999829A
Publication No. US20030195344A1
GENERAL INFORMATION:
APPLICANT: Ashkenazi, Avi
APPLICANT: Baker Kevin P.
APPLICANT: Botstein, David
APPLICANT: Desnoyers, Luc
APPLICANT: Eaton, Dan
APPLICANT: Ferrara, Napoleon
APPLICANT: Filvaroff, Ellen
APPLICANT: Fong, Sherman
APPLICANT: Gao, Wei-Qiang
APPLICANT: Gerber, Hanspeter
APPLICANT: Gertsen, Mary E.
APPLICANT: Goddard, Audrey
APPLICANT: Godowski, Paul J.
APPLICANT: Grimaldi, J. Christopher
APPLICANT: Gurney, Austin L.
APPLICANT: Hillan, Kenneth J.
APPLICANT: Kljavin, Ivar J.
APPLICANT: Kuo, Sophia S.
APPLICANT: Napier, Mary A.
APPLICANT: Pan, James
APPLICANT: Paoni, Nicholas F.
APPLICANT: Roy, Margaret Ann
APPLICANT: Shelton, David L.
APPLICANT: Stewart, Timothy A.
APPLICANT: Thomas, Daniel
APPLICANT: Williams, P. Mickey
APPLICANT: Wood, William I.
TITLE OF INVENTION: Secreted and Transmembrane Polypeptides and Nucleic
FILE REFERENCE: P2630P161
CURRENT APPLICATION NUMBER: US/09/999,829A
NUMBER OF SEQ ID NOS: 624
Prior Application removed - See File Wrapper or Palm
SEQ ID NO 169
LENGTH: 802
TYPE: PRT
ORGANISM: Homo sapiens
US-09-999-829A-169

Query Match 20.2%; Score 470; DB 10; Length 802;
Best Local Similarity 33.1%; Pred. No. 2.5e-31;
Matches 124; Conservative 52; Mismatches 145; Indels 54; Gaps 18;

QY 58 PCAS--LCCGHTC--DGTGFSQDCRSQWEGFPCQREVSFLNCSLDNGGCTHYCLEE 112
DB 448 PCGEGFLCSVAGLCVPAQGVK---DCPNGLDERNCVCRAIF-QCKEDS---TCISLPK 499
QY 113 VGNRSCAPGYKAGDDLLQCHPAVYPCGPRWKEKRSHLK-----RDTE 160
DB 500 V-----CDGQPDCLNGSDEQCQGV--PCGTFPQCE-DRCVKKPNQDCGRPDCRDS 552
QY 161 DOE-----DQVDFRLDGMKTRRSDSPWQVLLDSKKLACGAVLIHPSVTLTAACMD 214
DB 553 DEEHCDGCLQGPSSRTVGAWSSEGEPMWQ-ASLQVGRHITCGALIDRVNVTIAACFQ 611
QY 215 ESKKLVRAGEYDLR--WE--KW--ELDDIKEYFVHPNYSKSTDDNDIALHLAOPATL 269
DB 612 EDSMASTVLTWTFGLKWNQNSRWPBESFVSRLLHPHYEEDSHDYVALLQDHPVVR 671
QY 270 SQTIVPCLPDSGLAERLNOAQETLVYTGWGHSSSEKAKRNTFTVNLFIKIPVPHN 329
DB 672 SAAVRPVCPL---ARSHFEPGLHGWITGWG--ALREGGPIISN---ALQKVDVQLIPD 722

Qy 330 ECSEVMNMSBNMLCGLIGBROACBPGGPMVA--SFHQTFWLVGVSGEGCGLH 388
Db 723 LQSEAYRCVTPRLCAGRKGRKXDAOQSGSGGLVCALSGRWFLLGLVSMGLGGRPN 782
Qy 389 NYGVYTKVSRYLDMI 403
Db 783 YFGVYRLTGVISWI 797

RESULT 123
US-09-978-299A-169
/ Sequence 169, Application US/09978299A
/ Publication No. US20030199435A1
/ GENERAL INFORMATION:
/ APPLICANT: Ashkenazi, Avi
/ APPLICANT: Baker Kevin P.
/ APPLICANT: Botstein, David
/ APPLICANT: Desnoyers, Luc
/ APPLICANT: Eaton, Dan
/ APPLICANT: Ferrara, Napoleon
/ APPLICANT: Filvaroff, Ellen
/ APPLICANT: Fong, Sherman
/ APPLICANT: Gao, Wei-Qiang
/ APPLICANT: Gerber, Hanspeter
/ APPLICANT: Gertsen, Mary E.
/ APPLICANT: Goddard, Audrey
/ APPLICANT: Grimaldi, Paul J.
/ APPLICANT: Gurney, Austin L.
/ APPLICANT: Hillan, Kenneth J.
/ APPLICANT: Kijavian, Ivar J.
/ APPLICANT: Kuo, Sophia S.
/ APPLICANT: Napier, Mary A.
/ APPLICANT: Pan, James
/ APPLICANT: Paoni, Nicholas F.
/ APPLICANT: Roy, Margaret Ann
/ APPLICANT: Shelton, David L.
/ APPLICANT: Stewart, Timothy A.
/ APPLICANT: Tumas, Daniel
/ APPLICANT: Williams, P. Mickey
/ APPLICANT: Wood, William I.
/ TITLE OF INVENTION: Secreted and Transmembrane Polypeptides and Nucleic
/ FILE REFERENCE: P2630PIC3
/ CURRENT APPLICATION NUMBER: US/09/978,299A
/ PRIOR FILING DATE: 2001-10-15
/ PRIOR APPLICATION NUMBER: 09/918585
/ PRIOR FILING DATE: 2001-07-30
/ PRIOR APPLICATION NUMBER: 60/062250
/ PRIOR FILING DATE: 1997-10-17
/ PRIOR APPLICATION NUMBER: 60/064249
/ PRIOR FILING DATE: 1997-11-03
/ PRIOR APPLICATION NUMBER: 60/065311
/ PRIOR FILING DATE: 1997-11-13
/ PRIOR APPLICATION NUMBER: 60/066364
/ PRIOR FILING DATE: 1997-11-21
/ PRIOR APPLICATION NUMBER: 60/077450
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/ PRIOR APPLICATION NUMBER: 60/078004
/ PRIOR FILING DATE: 1998-03-13
/ PRIOR APPLICATION NUMBER: 60/078886
/ PRIOR FILING DATE: 1998-03-20
/ PRIOR APPLICATION NUMBER: 60/078936
/ PRIOR FILING DATE: 1998-03-20

/ PRIOR APPLICATION NUMBER: 60/078910
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/ PRIOR APPLICATION NUMBER: 60/078939
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/ PRIOR APPLICATION NUMBER: 60/082796

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;; PRIOR APPLICATION NUMBER: 60/085579
;; PRIOR FILING DATE: 1998-05-15
;; PRIOR APPLICATION NUMBER: 60/085580
;; PRIOR FILING DATE: 1998-05-15
;; PRIOR APPLICATION NUMBER: 60/085573
;; PRIOR FILING DATE: 1998-05-15
;; PRIOR APPLICATION NUMBER: 60/085704
;; PRIOR FILING DATE: 1998-05-15
;; PRIOR APPLICATION NUMBER: 60/085697

Query Match 20.2%; Score 470; DB 10; Length 802;

Best Local Similarity 33.1%; Pred. No. 2.5e-31;
Matches 124; Conservative 52; Mismatches 145; Indels 54; Gaps 18;

QY 58 PGAS-LCCGHTCT---DGIISFSDCCSGMGRFQFQVSTLNSLDNGCHYLTAE 112

Db 448 PCPGEFLCSYNGLCVEACDGVK---DCPGLDERNCVCRAF--QCKEDS---TCISLPK 499
QY 113 YCMRRCSCAPYKLGPDILQCHPAVKFPCCGRPWKEKKESHLK-----RDTE 160
Db 500 V-----CDGQPCDCLANGSDEBQCEGV--PCGTFPQGE--DRCCVKKRPPQCDRPPCRGGS 552
QY 161 DDE-----DCVDPRLIDKMTRRGDS PMQVTLDSKKKALCGAVLIHPSEVTLAAHMD 214
Db 553 DEHHCDCGLQCPSSRLIVGAVSSEGEWPMQ--ASLQVRGHHICGALLADRWVITNAHCFQ 611
QY 215 ESKULVPLGSDYLR--KW--ELDDIKVFVHPVPSKSTTDNDLTLHLAQPAL 269
Db 612 EISMASTVLMVTFLGKVMQNSRMEGEVSFKVSRLLHPHERDSHDYVALQLDHPVVR 671
QY 270 SQTIVPCLPGSLAEELNQGJELTVTCMGYHSREKAKRRRTVNLFIKIPVPHN 329
Db 672 SAANREVCPL---ASHNFEPLGHWITGNG--ALREGEPSN---ALQKVVYUJLPD 722
QY 330 ECSEVSNMVSNNMLCGILGDRDPCGDSGGPMVA--SFHGTWFLVGLVSGEGGGLIH 388
Db 723 LGEAVRYQVTPRLICAGYRKKGKDCACQDSGSPFLCKALSGRWFGLGLVSGIGGRPN 782
QY 389 NYGVTTKYSRLDWT 403
Db 783 YFGVYTRITGVISWI 797

RESULT 124
US-09-978-544A-169
Sequence 169, Application US/09978544A
Publication No. US20030199436A1
GENERAL INFORMATION:
APPLICANT: Ashkenazi, Avi
APPLICANT: Baker Kevin P.
APPLICANT: Betsstein, David
APPLICANT: Desnoyers, Luc
APPLICANT: Eaton, Dan
APPLICANT: Ferrara, Napoleon
APPLICANT: Filvaroff, Ellen
APPLICANT: Fong, Sherman
APPLICANT: Gao, Wei-Qiang
APPLICANT: Gerber, Hanspeter
APPLICANT: Gettisen, Mary B.
APPLICANT: Goddard, Audrey
APPLICANT: Godowski, Paul J.
APPLICANT: Grimaldi, J. Christopher
APPLICANT: Gurney, Austin L.
APPLICANT: Hillan, Kenneth J.
APPLICANT: Kijavich, Ivar J.
APPLICANT: Kuo, Sophia S.
APPLICANT: Napier, Mary A.
APPLICANT: Pan, James/
APPLICANT: Paoni, Nicholas F.
APPLICANT: Roy, Margaret Ann
APPLICANT: Shelton, David L.
APPLICANT: Stewart, Timothy A.
APPLICANT: Tumas, Daniel
APPLICANT: Williams, P. Mickey
TITLE OF INVENTION: Secreted and Transmembrane Polypeptides and Nucleic
FILE REFERENCE: P2630PIC13
CURRENT APPLICATION NUMBER: US/09/978, 544A
PRIOR APPLICATION NUMBER: 2002-03-19
PRIOR FILING DATE: 2001-07-30
PRIOR APPLICATION NUMBER: 60/062250
PRIOR FILING DATE: 1997-10-17
PRIOR APPLICATION NUMBER: 60/064249
PRIOR FILING DATE: 1997-11-03
PRIOR APPLICATION NUMBER: 60/065311
PRIOR FILING DATE: 1997-11-13
PRIOR APPLICATION NUMBER: 60/066364

[illegible]

; PRIOR FILING DATE: 1998-05-15
; PRIOR APPLICATION NUMBER: 60/085579
; PRIOR FILING DATE: 1998-05-15
; PRIOR APPLICATION NUMBER: 60/085580
; PRIOR FILING DATE: 1998-05-15
; PRIOR APPLICATION NUMBER: 60/085573
; PRIOR FILING DATE: 1998-05-15
; PRIOR APPLICATION NUMBER: 60/085704
; PRIOR FILING DATE: 1998-05-15
; PRIOR APPLICATION NUMBER: 60/085697

Query Match 20.2%; Score 470; DB 10; Length 802;
Best Local Similarity 33.1%; Pred. No. 2,5e-31;
Matches 124; Conservative 52; Mismatches 145; Indels 54; Gaps 18;

QY 58 PCAS--LCCGHCCT---DGISSFCDCRSGMGRPCQREVSPUNGSLNCGCTHYCEE 112
DB 448 PCGPFLLCSYNGLCVACDGVK---DQNGLDERNCTCRATF--CKEDBS---TCTSLPK 499
QY 113 VGMRRCS CAPGYKIGDHLIQCHPAVKPCGRPKMKRKRSHLK-----RDTE 160
DB 500 V---CDGQPDCLNGSDEEQCOEYV--PCGTFTEQCE--DRSCVKKMPQCDGRPCDRGS 552
QY 161 DDB-----DQVDBRLDGMTRKSGSPQVTLDSKKKLAQAVLIHSPVLTAAHMD 214
DB 553 DEBHDCCGLQGPSRITVGAVSSEGEWPMQ--ASIQVRGHTIGGALIDRWITTAHCFQ 611
QY 215 ESKLLVRLAGBYDLR--WE--ELDLDIKVFPVHPSKSTDDNDIALHLAQPATL 269
DB 612 EDSMASVLTWTFELGKWMQNSRWPESFKVSLHLHPHEDSHDVTALLQDHPVVR 671
QY 270 SQTIVICLPDPSGLAEELNQAQGETLVTCMGYHSSREKAKRRTFVAINFIKIPVBN 329
DB 672 SAAVRPTCLP---ASHFFEPGLHCWTITWG--ALREGGPISN---ALQKVDVLLIQD 722
QY 330 EGEVMSNNVSEMTLCGLIGRORACGSSGGPMYA--SHRGTFTLVGMSWEGCGLLH 388
DB 723 LCEBARKYQVTPRMLCAGYRKQKQKACGSGSGPLVCALSGRWFVLGWSGLCGRPN 782
QY 389 NVGVYTKVSRYLMI 403
DB 783 YRGVTRITGVISMI 797

RESULT 125

US-09-978-665A-169
; Sequence 169, Application US/09978665A

; Publication No. US20030199437A1
; GENERAL INFORMATION:

; APPLICANT: Ashkenazi, Avi
; APPLICANT: Baker Kevin P.
; APPLICANT: Botstein, David
; APPLICANT: Desnoyers, Luc
; APPLICANT: Eaton, Dan
; APPLICANT: Ferrara, Napoleon
; APPLICANT: Filvaroff, Ellen
; APPLICANT: Fong, Sherman
; APPLICANT: Gao, Wei-Qiang
; APPLICANT: Gerber, Hanspeter
; APPLICANT: Gertlisen, Mary E.
; APPLICANT: Goddard, Audrey
; APPLICANT: Godowski, Paul J.
; APPLICANT: Grimaldi, J. Christopher
; APPLICANT: Gurney, Austin L.
; APPLICANT: Hillan, Kenneth J.
; APPLICANT: Kijavlin, Ivar J.
; APPLICANT: Kuo, Sophia S.
; APPLICANT: Kapler, Mary A.
; APPLICANT: Pan, James
; APPLICANT: Paoni, Nicholas F.
; APPLICANT: Roy, Margaret Ann
; APPLICANT: Shelton, David L.
; APPLICANT: Stewart, Timothy A.

; APPLICANT: Tumas, Daniel
; APPLICANT: Williams, P. Mickey
; APPLICANT: Wood, William I.
; TITLE OF INVENTION: Secreted and Transmembrane Polypeptides and Nucleic
; TITLE OF INVENTION: Acids Encoding the Same
; FILE REFERENCE: P26307P1C19
; CURRENT APPLICATION NUMBER: US/09/978, 665A
; PRIOR FILING DATE: 2001-10-16
; PRIOR APPLICATION NUMBER: 09/918585
; PRIOR FILING DATE: 2001-07-30
; PRIOR APPLICATION NUMBER: 60/062250
; PRIOR FILING DATE: 1997-10-17
; PRIOR APPLICATION NUMBER: 60/064249
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; PRIOR APPLICATION NUMBER: 60/083499
; PRIOR FILING DATE: 1998-04-29
; PRIOR APPLICATION NUMBER: 60/083545
; PRIOR FILING DATE: 1998-04-29
; PRIOR APPLICATION NUMBER: 60/083554
; PRIOR FILING DATE: 1998-04-29
; PRIOR APPLICATION NUMBER: 60/083558
; PRIOR FILING DATE: 1998-04-29
; PRIOR APPLICATION NUMBER: 60/083559
; PRIOR FILING DATE: 1998-04-29
; PRIOR APPLICATION NUMBER: 60/083500
; PRIOR FILING DATE: 1998-04-29
; PRIOR APPLICATION NUMBER: 60/083742
; PRIOR FILING DATE: 1998-04-30
; PRIOR APPLICATION NUMBER: 60/084366
; PRIOR FILING DATE: 1998-05-05
; PRIOR APPLICATION NUMBER: 60/084414
; PRIOR FILING DATE: 1998-05-06
; PRIOR APPLICATION NUMBER: 60/084441
; PRIOR FILING DATE: 1998-05-06
; PRIOR APPLICATION NUMBER: 60/084637
; PRIOR FILING DATE: 1998-05-07
; PRIOR APPLICATION NUMBER: 60/084639
; PRIOR FILING DATE: 1998-05-07
; PRIOR APPLICATION NUMBER: 60/084640
; PRIOR FILING DATE: 1998-05-07
; PRIOR APPLICATION NUMBER: 60/084598
; PRIOR FILING DATE: 1998-05-07

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; PRIOR APPLICATION NUMBER: 60/084600
; PRIOR FILING DATE: 1998-05-07
; PRIOR APPLICATION NUMBER: 60/084627
; PRIOR FILING DATE: 1998-05-07
; PRIOR APPLICATION NUMBER: 60/084643
; PRIOR FILING DATE: 1998-05-07
; PRIOR APPLICATION NUMBER: 60/085339
; PRIOR FILING DATE: 1998-05-13
; PRIOR APPLICATION NUMBER: 60/085338
; PRIOR FILING DATE: 1998-05-13
; PRIOR APPLICATION NUMBER: 60/085323
; PRIOR FILING DATE: 1998-05-13
; PRIOR APPLICATION NUMBER: 60/085582
; PRIOR FILING DATE: 1998-05-15
; PRIOR APPLICATION NUMBER: 60/085700
; PRIOR FILING DATE: 1998-05-15
; PRIOR APPLICATION NUMBER: 60/085689
; PRIOR FILING DATE: 1998-05-15
; PRIOR APPLICATION NUMBER: 60/085579
; PRIOR FILING DATE: 1998-05-15
; PRIOR APPLICATION NUMBER: 60/085580
; PRIOR FILING DATE: 1998-05-15
; PRIOR APPLICATION NUMBER: 60/085573
; PRIOR FILING DATE: 1998-05-15
; PRIOR APPLICATION NUMBER: 60/085704
; PRIOR FILING DATE: 1998-05-15
; PRIOR APPLICATION NUMBER: 60/085697

```

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Query Match 20.2% Score 470; DB 10; Length 802;
Best Local Similarity 33.1% Pred. No. 2.5e-31;
Matches 124; Conservative 52; Mismatches 145; Indels 54; Gaps 18;

```

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QY 58 PCAS--LCCGHTCI---DGIGSPDCRSGWGRFCOREVSPUNGSLUNGCTHYCLEE 112
DB 448 PGPBEPICSVNGLCVPACDGYK-----DCENGIDENHCVCATF-QCKEDS---TGISLPK 499
QY 113 VGMRRCSGAPGYLGDLLQHPVYKPCGRPMKMKKSHLK-----KDTL 160
DB 500 V----CDGQPDCLNGSDEOCQBGV--PGTFTPOCE--DRSCVKKPNQCDGRPDCEGGS 552
QY 161 DOE-----DQVDFLIDGKMTTRGDSPMQVVLNLSKKKLAAGVLIHSSVLTZAACMD 214
DB 553 DEHDCGCLGPPSSRIVGGAUSSGEMPMQ--ASLDVGRHICGALLARWITAAHQFO 611
QY 215 ESKKILVRLGEYDLRR--KW--BLDLDIKVFNHNTSKSTTNDIALHIAQPAVL 269
DB 612 EDMSATVLTWTVLFGWQNSRMPGVSFKVSRLLHHPYHEDSHDYVALQLDHPYVR 671
QY 270 SQTIVPCLPDSGLARBLNDAGQETLVGMGYHSSREKAKRRTFVNFIKIPVPHN 329
DB 672 SAAYRVPCLP---ARSHFEPGJHCWITGWC--ALRGGFISN--ALQKVQVLIPQD 722
QY 330 EESSEWNSWTSXNMLCAQGLLRQDACEGDSGAPVVA--SPHGTVLGLVWSGCGILLH 388
DB 723 LQSEHRYQVTFPMLCAGRKGRKDAQGDSDGPIVCAALSGNFIAGLVWSGCGRPN 782
QY 389 NYGVYTKVSRYYDWT 403
DB 783 YGVYVTRITGVISWI 797

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RESULT 126
US-09-978-802A-169
; Sequence 169, Application US/09978802A
; Publication No. US20030199674A1
; GENERAL INFORMATION:
; APPLICANT: Ashkenazi, Avi
; APPLICANT: Baker Kevin P.
; APPLICANT: Botstein, David
; APPLICANT: Desnoyers, Inc
; APPLICANT: Eaton, Dan
; APPLICANT: Ferrara, Napoleon
; APPLICANT: Filvaroff, Ellen

```

APPLICANT: Fong, Sherman
APPLICANT: Gao, Wei-Qiang
APPLICANT: Gerber, Hanspeter
APPLICANT: Gerritsen, Mary E.
APPLICANT: Goddard, Audrey
APPLICANT: Godowski, Paul J.
APPLICANT: Grimaldi, J. Christopher
APPLICANT: Guirney, Austin L.
APPLICANT: Hillan, Kenneth J.
APPLICANT: KJavin, Ivar J.
APPLICANT: Kuo, Sophia S.
APPLICANT: Napier, Mary A.
APPLICANT: Pan, James;
APPLICANT: Paoni, Nicholas F.
APPLICANT: Roy, Margaret Ann
APPLICANT: Shelton, David L.
APPLICANT: Stewart, Timothy A.
APPLICANT: Tumas, Daniel
APPLICANT: Williams, P. Mickey
APPLICANT: Wood, William I.
TITLE OF INVENTION: Acids and Transmembrane Polypeptides and Nucleic
FILE REFERENCE: P2630P1C20
CURRENT APPLICATION NUMBER: US/09/978, 802A
CURRENT FILING DATE: 2001-10-16
PRIOR APPLICATION NUMBER: 09/918585
PRIOR FILING DATE: 2001-07-30
PRIOR APPLICATION NUMBER: 60/062250
PRIOR FILING DATE: 1997-10-17
PRIOR APPLICATION NUMBER: 60/064249
PRIOR FILING DATE: 1997-11-03
PRIOR APPLICATION NUMBER: 60/065311
PRIOR FILING DATE: 1997-11-13
PRIOR APPLICATION NUMBER: 60/066364
PRIOR FILING DATE: 1997-11-21
PRIOR APPLICATION NUMBER: 60/077450
PRIOR FILING DATE: 1998-03-10
PRIOR APPLICATION NUMBER: 60/077632
PRIOR FILING DATE: 1998-03-11
PRIOR APPLICATION NUMBER: 60/077641
PRIOR FILING DATE: 1998-03-11
PRIOR APPLICATION NUMBER: 60/077649
PRIOR FILING DATE: 1998-03-11
PRIOR APPLICATION NUMBER: 60/077991
PRIOR FILING DATE: 1998-03-12
PRIOR APPLICATION NUMBER: 60/078004
PRIOR FILING DATE: 1998-03-13
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PRIOR APPLICATION NUMBER: 60/079664
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PRIOR FILING DATE: 1998-04-08
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PRIOR FILING DATE: 1998-04-29
PRIOR APPLICATION NUMBER: 60/083500

PRIOR FILING DATE: 1998-04-29
PRIOR APPLICATION NUMBER: 60/083742
PRIOR FILING DATE: 1998-04-30
PRIOR APPLICATION NUMBER: 60/084366
PRIOR FILING DATE: 1998-05-05
PRIOR APPLICATION NUMBER: 60/084414
PRIOR FILING DATE: 1998-05-06
PRIOR APPLICATION NUMBER: 60/084441
PRIOR FILING DATE: 1998-05-06
PRIOR APPLICATION NUMBER: 60/084637
PRIOR FILING DATE: 1998-05-07
PRIOR APPLICATION NUMBER: 60/084639
PRIOR FILING DATE: 1998-05-07
PRIOR APPLICATION NUMBER: 60/084640
PRIOR FILING DATE: 1998-05-07
PRIOR APPLICATION NUMBER: 60/084598
PRIOR FILING DATE: 1998-05-07
PRIOR APPLICATION NUMBER: 60/084600
PRIOR FILING DATE: 1998-05-07
PRIOR APPLICATION NUMBER: 60/084627
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PRIOR FILING DATE: 1998-05-13
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PRIOR APPLICATION NUMBER: 60/085323
PRIOR FILING DATE: 1998-05-13
PRIOR APPLICATION NUMBER: 60/085582
PRIOR FILING DATE: 1998-05-15
PRIOR APPLICATION NUMBER: 60/085700
PRIOR FILING DATE: 1998-05-15
PRIOR APPLICATION NUMBER: 60/085689
PRIOR FILING DATE: 1998-05-15
PRIOR APPLICATION NUMBER: 60/085579
PRIOR FILING DATE: 1998-05-15
PRIOR APPLICATION NUMBER: 60/085580
PRIOR FILING DATE: 1998-05-15
PRIOR APPLICATION NUMBER: 60/085573
PRIOR FILING DATE: 1998-05-15
PRIOR APPLICATION NUMBER: 60/085704
PRIOR FILING DATE: 1998-05-15
PRIOR APPLICATION NUMBER: 60/085697

Query Match 20.2%; Score 470; DB 10; Length 802;

Best Local Similarity 33.1%; Pred. No. 2, 5e-31;

Matches 124; Conservative 52; Mismatches 145; Indels 54; Gaps 18;

58 PCAS--LCCGHTCI---DGIQSPSCDSCSGMEGRFCQREVSFLANGGCTHYCLER 112
448 PCGPEFLICVNGLCYPCACDGVK---DCENGILDEKCYCRATF-QCKEDS---TCISLPK 499
113 VGMWRCSCAPRYLGDILLQCHPAVKFPCGPRWKKMKKSHLK-----RDTE 160
500 V----CDGPDCLNGSDEEQCEGV--PCGTFTPQCE-DSCVKKMPQCDGRDPCDGS 552
161 DOE-----DQVDPRLIDKXTRRGSPQVVLDSKKLLCAQALVHHSWTLAAACMD 214
553 DEEHDCGLGGPSSRIVGAVSSEGEPPWQ-ASLQVRGRHICGALLADRWITDAACFO 611
215 BSKLLVRLGEYDLER-WE--KM--EILDLDIKEVFNHPNYSKSTTNDIALMLAOPATL 269
612 EDSMASTVLTWVFLGKVNQNSRMGEVSFVSRLLHLHYHEDSHDYVALLQDHPVVR 671
270 SGTVPICLPDGLARELINAQGETLVTKGHHSSREKKNRFTVNTFKIPVVPAN 329
672 SAAYRVPCLP---ASHHFEPGJHCWITGWS--ALRSGPISV---ALQXVDVQLIPOD 722
330 ECGRWGNSWNSNNMLCAGILGRDACAQDSSGSPWVA-SFHTGTPVLGVSWGBCGGLH 388
723 LQSEHRYQVTPMLCAGIRKGRKCAQDSSGSPVLVCAALSGRWFLAGLVSWGLCGRPN 782

Qy 389 NGVYTKVSYLDWT 403
Db 783 YRGVTRITGVISWI 797

RESULT 127

US-10-164-749A-169

Sequence 169, Application US/10164749A

Publication No. US20040029218A1

GENERAL INFORMATION:

APPLICANT: Ashkenazi, Avi

APPLICANT: Baker Kevin P.

APPLICANT: Boctstein, David

APPLICANT: Deancysers, Luc

APPLICANT: Eaton, Dan

APPLICANT: Petrara, Napoleon

APPLICANT: Filvaroff, Ellen

APPLICANT: Fong, Sherman

APPLICANT: Gao, Wei-Qiang

APPLICANT: Gerber, Hanspeter

APPLICANT: Goddard, Audrey

APPLICANT: Godowski, Paul J.

APPLICANT: Grimaldi, J. Christopher

APPLICANT: Gurney, Austin L.

APPLICANT: Hillan, Kenneth J

APPLICANT: Kljavin, Ivar J.

APPLICANT: Kuo, Sophia S.

APPLICANT: Napier, Mary A.

APPLICANT: Pan, James J.

APPLICANT: Paoni, Nicholas F.

APPLICANT: Roy, Margaret Ann

APPLICANT: Shelton, David L.

APPLICANT: Stewart, Timothy A.

APPLICANT: Tumas, Daniel

APPLICANT: Williams, P. Mickey

APPLICANT: Wood, William I.

TITLE OF INVENTION: Secreted and Transmembrane Polypeptides and Nucleic

FILE REFERENCE: P2630P1C60

CURRENT APPLICATION NUMBER: US/10/164,749A

PRIOR FILING DATE: 2001-10-19

PRIOR APPLICATION NUMBER: 09/918585

PRIOR FILING DATE: 2001-07-30

PRIOR APPLICATION NUMBER: 60/062250

PRIOR FILING DATE: 1997-10-17

PRIOR APPLICATION NUMBER: 60/064249

PRIOR FILING DATE: 1997-11-03

PRIOR APPLICATION NUMBER: 60/065311

PRIOR FILING DATE: 1997-11-13

PRIOR APPLICATION NUMBER: 60/066364

PRIOR FILING DATE: 1997-11-21

PRIOR APPLICATION NUMBER: 60/077450

PRIOR FILING DATE: 1998-03-10

PRIOR APPLICATION NUMBER: 60/077632

PRIOR FILING DATE: 1998-03-11

PRIOR APPLICATION NUMBER: 60/077641

PRIOR FILING DATE: 1998-03-11

PRIOR APPLICATION NUMBER: 60/077649

PRIOR FILING DATE: 1998-03-11

PRIOR APPLICATION NUMBER: 60/077791

PRIOR FILING DATE: 1998-03-12

Remaining prior Application data removed - See File Wrapper or PAM.

NUMBER OF SEQ ID NOS: 624

SEQ ID NO 169

LENGTH: 802

TYPE: PRT

ORGANISM: Homo sapiens

US-10-164-749A-169

Query Match

20.2%; Score 470; DB 12; Length 802;

Best Local Similarity 33.1%; Pred. No. 2, 5e-31;
Matches 124; Conservative 52; Mismatches 145; Indels 54; Gaps 18;

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QY 58 PCAS--LCCGHTCI---DGIGSFSCDCRSQWGRPCQREVSFLNGLSGCTHYCEE 112
Db 448 PCGGEFLCSVNGLCVAPCDGVK---DCPNGLDBRNCVCRATF-QCKBDS---TCTSLPK 499
QY 113 VGMRRGSCAPGYKLGDDLLQCHPAVKPCGRPKMKRKRSHLK-----RDTE 160
Db 500 V----CDGQPCDCLNGSDEBQCOEGV--PCGTFTFQCE--DRSCVKKPNPQCDGRPDRCRGS 552
QY 161 DQF-----DQVDFRLIDGKMTKRGDSFPMQVYLLDSKKKLAGAVLHPSVYLTAAHCHMD 214
Db 553 DEHDCDGLQSPSSRLVYGAVSSRGEWPMQ--ASLQVRGRNHCGGALIAIRWVITAAHCFQ 611
QY 215 ESKKLVLRLGEYDLRR--WE--ELDLIKFVPHPYKSTTDNDIALHLAQPATL 269
Db 612 EDMSASTVLTMTVFLGKVMQNSRMPGVSFYKSLHLHPHEDSHDIDVALLQDHPVVR 671
QY 270 SQTIVPICLPDSGLAEREINQAGETLVTGMYHSSREKARKMTFVNLFIKIPVPEHN 329
Db 672 SAAYRVCPLP---ARSHFEPEGLHCWITGNG--ALREGGPTSN---ALQKVDVQLIPQD 722
QY 330 EGEWMSNMVSENNLCAGLIGRDQACGDSGGPMVA--SFHGTWFLVGLVSGEGGLIH 388
Db 723 LCESEAYRYQVTPRMLCAGYRKGRKQKDCQSDSGGLVCKALSGRMTLAGLVSWGLQCGRPN 782
QY 389 NYGVYTKVSRYLDMT 403
Db 783 YFGVYTRITGVISMT 797

RESULT 128
US-09-999-831A-169
; Sequence 169, Application US/09999831A
; Publication No. US2004004832A1
; GENERAL INFORMATION:
; APPLICANT: Ashkenazi, Avi
; APPLICANT: Baker Kevin P.
; APPLICANT: Botstein, David
; APPLICANT: Desnoyers, Luc
; APPLICANT: Eaton, Dan
; APPLICANT: Ferrara, Napoleon
; APPLICANT: Filvaroff, Ellen
; APPLICANT: Fong, Sherman
; APPLICANT: Gao, Wei-Qiang
; APPLICANT: Gerber, Hanspeter
; APPLICANT: Gerlitsen, Mary E.
; APPLICANT: Goddard, Audrey
; APPLICANT: Godowski, Paul J.
; APPLICANT: Grimaldi, J. Christopher
; APPLICANT: Gurney, Austin L.
; APPLICANT: Hillan, Kenneth J.
; APPLICANT: Kijavlin, Ivar J.
; APPLICANT: Kuo, Sophia S.
; APPLICANT: Napier, Mary A.
; APPLICANT: Pan, James
; APPLICANT: Paoni, Nicholas F.
; APPLICANT: Roy, Margaret Ann
; APPLICANT: Shelton, David L.
; APPLICANT: Stewart, Timothy A.
; APPLICANT: Tumas, Daniel
; APPLICANT: Williams, P. Mickey
; APPLICANT: Wood, William I.
; TITLE OF INVENTION: Secreted and Transmembrane Polypeptides and Nucleic
; FILE REFERENCE: P2630P1C68
; CURRENT APPLICATION NUMBER: US/09/999,831A
; CURRENT FILING DATE: 2002-03-25
; NUMBER OF SEQ ID NOS: 624
; Prior Application removed - See File Wrapper or Palm
; SEQ ID NO 169
; LENGTH: 802
; TYPE: PRT
; ORGANISM: Homo sapiens

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```

US-09-999-831A-169
Query Match 20.2%; Score 470; DB 12; Length 802;
Best Local Similarity 33.1%; Pred. No. 2,5e-31;
Matches 124; Conservative 52; Mismatches 145; Indels 54; Gaps 18;

QY 58 PCAS--LCCGHTCI---DGIGSFSCDCRSQWGRPCQREVSFLNGLSGCTHYCEE 112
Db 448 PCGGEFLCSVNGLCVAPCDGVK---DCPNGLDBRNCVCRATF-QCKBDS---TCTSLPK 499
QY 113 VGMRRGSCAPGYKLGDDLLQCHPAVKPCGRPKMKRKRSHLK-----RDTE 160
Db 500 V----CDGQPCDCLNGSDEBQCOEGV--PCGTFTFQCE--DRSCVKKPNPQCDGRPDRCRGS 552
QY 161 DQF-----DQVDFRLIDGKMTKRGDSFPMQVYLLDSKKKLAGAVLHPSVYLTAAHCHMD 214
Db 553 DEHDCDGLQSPSSRLVYGAVSSRGEWPMQ--ASLQVRGRNHCGGALIAIRWVITAAHCFQ 611
QY 215 ESKKLVLRLGEYDLRR--WE--ELDLIKFVPHPYKSTTDNDIALHLAQPATL 269
Db 612 EDMSASTVLTMTVFLGKVMQNSRMPGVSFYKSLHLHPHEDSHDIDVALLQDHPVVR 671
QY 270 SQTIVPICLPDSGLAEREINQAGETLVTGMYHSSREKARKMTFVNLFIKIPVPEHN 329
Db 672 SAAYRVCPLP---ARSHFEPEGLHCWITGNG--ALREGGPTSN---ALQKVDVQLIPQD 722
QY 330 EGEWMSNMVSENNLCAGLIGRDQACGDSGGPMVA--SFHGTWFLVGLVSGEGGLIH 388
Db 723 LCESEAYRYQVTPRMLCAGYRKGRKQKDCQSDSGGLVCKALSGRMTLAGLVSWGLQCGRPN 782
QY 389 NYGVYTKVSRYLDMT 403
Db 783 YFGVYTRITGVISMT 797

RESULT 129
US-10-013-917A-169
; Sequence 169, Application US/10013917A
; Publication No. US20040063921A1
; GENERAL INFORMATION:
; APPLICANT: Ashkenazi, Avi
; APPLICANT: Baker Kevin P.
; APPLICANT: Botstein, David
; APPLICANT: Desnoyers, Luc
; APPLICANT: Eaton, Dan
; APPLICANT: Ferrara, Napoleon
; APPLICANT: Filvaroff, Ellen
; APPLICANT: Fong, Sherman
; APPLICANT: Gao, Wei-Qiang
; APPLICANT: Gerber, Hanspeter
; APPLICANT: Gerlitsen, Mary E.
; APPLICANT: Goddard, Audrey
; APPLICANT: Godowski, Paul J.
; APPLICANT: Grimaldi, J. Christopher
; APPLICANT: Gurney, Austin L.
; APPLICANT: Hillan, Kenneth J.
; APPLICANT: Kijavlin, Ivar J.
; APPLICANT: Kuo, Sophia S.
; APPLICANT: Napier, Mary A.
; APPLICANT: Pan, James
; APPLICANT: Paoni, Nicholas F.
; APPLICANT: Roy, Margaret Ann
; APPLICANT: Shelton, David L.
; APPLICANT: Stewart, Timothy A.
; APPLICANT: Tumas, Daniel
; APPLICANT: Williams, P. Mickey
; APPLICANT: Wood, William I.
; TITLE OF INVENTION: Secreted and Transmembrane Polypeptides and Nucleic
; FILE REFERENCE: P2630P1C82
; CURRENT APPLICATION NUMBER: US/10/013,917A
; CURRENT FILING DATE: 2001-10-25
; Prior Application removed - See File Wrapper or Palm

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NUMBER OF SEQ ID NOS: 624
SEQ ID NO 169
LENGTH: 802
TYPE: PRT
ORGANISM: Homo sapiens
US-10-013-917A-169

Query Match 20.2% Score 470; DB 12; Length 802;
Best Local Similarity 33.1%; Pred. No. 2.5e-31;
Matches 124; Conservative 52; Mismatches 145; Indels 54; Gaps 18;

58 PCAS-LCCGHTCI---DIGSFS-CDCRSGWRPCQREVSFLNCSLNGGCTHYCEE 112
448 PCPEPFLCSYNGLCYPAADGVK---DCPNGLDERNCVCAGTF-QCKEDS---TCLSLPK 499
113 VGNRRCSAPGYKLGDDILQCHPAVYFPGGAPMKRMKRSKSHLK-----RDTE 160
500 V---CDGPGDCLNSDEECQOBGV--PGGFTTQCE-DNSCYKKNPQCDGRPDRCDS 552
161 DOE-----DQVDPRLDGMTRGDSPMQVVLDSKKKLACGAVLHPSAVLPAACMD 214
553 DEHDCGCIQPSSTIVGAVSSEGEPMQ-ASIQVFGRIHICGALLIDRWVITPAHCQ 611
215 ESKDLVRGEXDLRR-WE--KW--ELDLDIKVFPVHPNYSKSTTDNDIALHLAOPATL 269
612 EDMSASTVLMVTFELKQWQNSRMPGEVSFKYSRLILHPHEEDSHDYVALLQDHPVVR 671
270 SQTIVPLCPDGLAEELNDAQETLVYNGCYSSSEKAKRNTFPLINIKYIPVYPEN 329
672 SAAVRPVCPLP---ARSHFEPGHCMTIGMG--ALREGGPISN--MLOKVYDQILPOD 722
330 ECSEVSNVSENMLCAGILGDRODACEDSGGPVVA-SPHGTWFLVGLVSWEGCGGLH 388
723 LCSHARVQYTRMTCAGYRKCKDKACQDSGSPVYCKALSGNPLAGVSWELGCGRRN 782
389 NYGVYTKVSRYLDMWT 403
783 YFGVYTRITGVISWI 797

RESULT 130

US-09-999-834A-169
Sequence 169, Application US/09999834A
GENERAL INFORMATION:
APPLICANT: Ashkenazi, Avi
APPLICANT: Baker Kevin P.
APPLICANT: Botstein, David
APPLICANT: Deamoyers, Luc
APPLICANT: Eaton, Dan
APPLICANT: Ferrara, Napoleon
APPLICANT: Pliavroff, Ellen
APPLICANT: Pong, Sherman
APPLICANT: Gao, Wei-Qiang
APPLICANT: Gerber, Hanspeter
APPLICANT: Gerltsen, Mary B.
APPLICANT: Goddard, Audrey
APPLICANT: Godowski, Paul J.
APPLICANT: Grimaldi, J. Christopher
APPLICANT: Gurney, Austin L.
APPLICANT: Hillan, Kenneth J.
APPLICANT: Kijavlin, Ivar J.
APPLICANT: Kuo, Sophia S.
APPLICANT: Napier, Mary A.
APPLICANT: Pan, James
APPLICANT: Paoni, Nicholas F.
APPLICANT: Roy, Margaret Ann
APPLICANT: Shelton, David L.
APPLICANT: Stewart, Timothy A.
APPLICANT: Tumas, Daniel
APPLICANT: Williams, P. Mickey
APPLICANT: Wood, William I.
TITLE OF INVENTION: Secreted and Transmembrane Polypeptides and Nucleic

TITLE OF INVENTION: Acids Encoding the Same
FILE REFERENCE: P2630P1C75
CURRENT APPLICATION NUMBER: US/09/999,834A
CURRENT FILING DATE: 2001-10-24
PRIOR APPLICATION NUMBER: 09/918585
PRIOR FILING DATE: 2001-07-30
PRIOR APPLICATION NUMBER: 60/062250
PRIOR FILING DATE: 1997-10-17
PRIOR APPLICATION NUMBER: 60/064249
PRIOR FILING DATE: 1997-11-03
PRIOR APPLICATION NUMBER: 60/065311
PRIOR FILING DATE: 1997-11-13
PRIOR APPLICATION NUMBER: 60/066364
PRIOR FILING DATE: 1997-11-21
PRIOR APPLICATION NUMBER: 60/077450
PRIOR FILING DATE: 1998-03-10
PRIOR APPLICATION NUMBER: 60/077632
PRIOR FILING DATE: 1998-03-11
PRIOR APPLICATION NUMBER: 60/077641
PRIOR FILING DATE: 1998-03-11
PRIOR APPLICATION NUMBER: 60/077649
PRIOR FILING DATE: 1998-03-11
PRIOR APPLICATION NUMBER: 60/077791
PRIOR FILING DATE: 1998-03-12
PRIOR APPLICATION NUMBER: 60/078004
PRIOR FILING DATE: 1998-03-13
PRIOR APPLICATION NUMBER: 60/078886
PRIOR FILING DATE: 1998-03-20
PRIOR APPLICATION NUMBER: 60/078936
PRIOR FILING DATE: 1998-03-20
PRIOR APPLICATION NUMBER: 60/078910
PRIOR FILING DATE: 1998-03-20
PRIOR APPLICATION NUMBER: 60/078939
PRIOR FILING DATE: 1998-03-20
PRIOR APPLICATION NUMBER: 60/079294
PRIOR FILING DATE: 1998-03-25
PRIOR APPLICATION NUMBER: 60/079656
PRIOR FILING DATE: 1998-03-26
PRIOR APPLICATION NUMBER: 60/079664
PRIOR FILING DATE: 1998-03-27
PRIOR APPLICATION NUMBER: 60/079689
PRIOR FILING DATE: 1998-03-27
PRIOR APPLICATION NUMBER: 60/079663
PRIOR FILING DATE: 1998-03-27
PRIOR APPLICATION NUMBER: 60/079728
PRIOR FILING DATE: 1998-03-27
PRIOR APPLICATION NUMBER: 60/079786
PRIOR FILING DATE: 1998-03-27
PRIOR APPLICATION NUMBER: 60/079920
PRIOR FILING DATE: 1998-03-30
PRIOR APPLICATION NUMBER: 60/079923
PRIOR FILING DATE: 1998-03-30
PRIOR APPLICATION NUMBER: 60/080105
PRIOR FILING DATE: 1998-03-31
PRIOR APPLICATION NUMBER: 60/080107
PRIOR FILING DATE: 1998-03-31
PRIOR APPLICATION NUMBER: 60/080165
PRIOR FILING DATE: 1998-03-31
PRIOR APPLICATION NUMBER: 60/080194
PRIOR FILING DATE: 1998-03-31
PRIOR APPLICATION NUMBER: 60/080327
PRIOR FILING DATE: 1998-04-01
PRIOR APPLICATION NUMBER: 60/080328
PRIOR FILING DATE: 1998-04-01
PRIOR APPLICATION NUMBER: 60/080333
PRIOR FILING DATE: 1998-04-01
PRIOR APPLICATION NUMBER: 60/080334
PRIOR FILING DATE: 1998-04-01
PRIOR APPLICATION NUMBER: 60/081070
PRIOR FILING DATE: 1998-04-08
PRIOR APPLICATION NUMBER: 60/081049
PRIOR FILING DATE: 1998-04-08
PRIOR APPLICATION NUMBER: 60/081071

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1      PRIOR APPLICATION NUMBER: 60/084644
2      PRIOR FILING DATE: 1998-05-07
3      PRIOR APPLICATION NUMBER: 60/085339
4      PRIOR FILING DATE: 1998-05-13
5      PRIOR APPLICATION NUMBER: 60/085338
6      PRIOR FILING DATE: 1998-05-13
7      PRIOR APPLICATION NUMBER: 60/085323
8      PRIOR FILING DATE: 1998-05-13
9      PRIOR APPLICATION NUMBER: 60/085582
10     PRIOR FILING DATE: 1998-05-15
11     PRIOR APPLICATION NUMBER: 60/085700
12     PRIOR FILING DATE: 1998-05-15
13     PRIOR APPLICATION NUMBER: 60/085689
14     PRIOR FILING DATE: 1998-05-15
15     PRIOR APPLICATION NUMBER: 60/085579
16     PRIOR FILING DATE: 1998-05-15
17     PRIOR APPLICATION NUMBER: 60/085580
18     PRIOR FILING DATE: 1998-05-15
19     PRIOR APPLICATION NUMBER: 60/085573
20     PRIOR FILING DATE: 1998-05-15
21     PRIOR APPLICATION NUMBER: 60/085704
22     PRIOR FILING DATE: 1998-05-15
23     PRIOR APPLICATION NUMBER: 60/085697
24
25 Query Match      20.2%; Score 470; DB 12; Length 802;
26 Match Similarity 33.1%; Pred.No.2.5e-31;
27 Ketches 124; Conservative 52; Mismatches 145; Indels 54; Gaps
28

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```

; APPLICANT: Goddard, Audrey
; APPLICANT: Godowski, Paul J.
; APPLICANT: Grimaldi, J. Christopher
; APPLICANT: Gurney, Austin L.
; APPLICANT: Hillan, Kenneth J.
; APPLICANT: Kijavini, Ivar J.
; APPLICANT: Kuo, Sophia S.
; APPLICANT: Napier, Mary A.
; APPLICANT: Pan, James;
; APPLICANT: Paoni, Nicholas F.
; APPLICANT: Roy, Margaret Ann
; APPLICANT: Shelton, David L.
; APPLICANT: Stewart, Timothy A.
; APPLICANT: Tumas, Daniel
; APPLICANT: Williams, P. Mickey
; APPLICANT: Wood, William I.
; TITLE OF INVENTION: Secreted and Transmembrane Polypeptides and Nucleic
; FILE REFERENCE: P2630PIC55
; CURRENT APPLICATION NUMBER: US/10/162,521A
; PRIOR FILING DATE: 2002-11-29
; PRIOR APPLICATION NUMBER: 09/918585
; PRIOR FILING DATE: 2001-07-30
; PRIOR APPLICATION NUMBER: 60/062250
; PRIOR FILING DATE: 1997-10-17
; PRIOR APPLICATION NUMBER: 60/064249
; PRIOR FILING DATE: 1997-11-03
; PRIOR APPLICATION NUMBER: 60/065311
; PRIOR FILING DATE: 1997-11-13
; PRIOR APPLICATION NUMBER: 60/066364
; PRIOR FILING DATE: 1997-11-21
; PRIOR APPLICATION NUMBER: 60/077450
; PRIOR FILING DATE: 1998-03-10
; PRIOR APPLICATION NUMBER: 60/077632
; PRIOR FILING DATE: 1998-03-11
; PRIOR APPLICATION NUMBER: 60/077641
; PRIOR FILING DATE: 1998-03-11
; PRIOR APPLICATION NUMBER: 60/077649
; PRIOR FILING DATE: 1998-03-11
; PRIOR APPLICATION NUMBER: 60/077791
; PRIOR FILING DATE: 1998-03-12
; Remaining Prior Application data removed - See File Wrapper or PALM.
; NUMBER OF SEQ ID NOS: 624
; SEQ ID NO 169
; LENGTH: 802
; TYPE: PRT
; ORGANISM: Homo sapiens
; US-10-162-521A-169

Query Match      20.2%; Score 470; DB 12; Length 802;
Best Local Similarity 33.1%; Pred. No. 2.5e-31;
Matches 144; Conservative 52; Mismatches 145; Indels 54; Gaps 18;

QY 58 PCAS--LCCGHTCI---DGIISFSCDRCRSGWEGHPCQREVSPLNSLDNQCCTHYCLEE 112
DB 448 PGGGFLCSYNGLCVACAGGVK---DOPNGLDERNVCGRATF-QCKEBS--TCTSLPK 499
QY 113 VGMRRGSCAPRYKLDLQCHPAVYKPCRPKMKREKREKHLK-----RTE 160
DB 500 V-----CDGQPCDCLNGSDDEQCOEGV--PCGTFPFQCE-DRCVKKRPPQCDGRPDCRG 552
QY 161 DDE-----DQVDPRLIDGKMTGRGDSFMQVTVLSDSKKLLACGAVLHPSWYLTAAHOMD 214
DB 553 DEHDGCGIQCPSRRIVGAGVSSGSEFMQ--ASLQVRGHHICGALLADRWITTAHCFQ 611
QY 215 ESKULVRLGELYLR-WB--ELDLDIKEVFVHPYYSKTTNDIALHLAQPTL 269
DB 612 EDSMASTLWTVFLGKWKQNSRMPGEVSFVSLHLHPYHEDSDVDVALQLDHPVVR 671
QY 270 SCTIVPTCLPDSGLAERLNAQGETLVYTGWGHRSREKAKRRRTVNAFKIVVPHN 329
DB 672 SAAPVPLP-----ASHHFEPEGHLHWITMG--ALREGGPISN--ALQKYVDLHID 722

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QY 330 ECSEWMSNNVSENMLCAGILGRQDACGSDSGGPVVA-SFHGTWFLVGLVSGEGCGLLH 388
DB 723 LCSFAHYQVTPRMLCAGYRKCKKDACQSDSGPLVKAISGWFVLAGVSGGCRPN 782
QY 389 NYGVYTVKSRYLDMT 403
DB 783 YFGVYTRITGVISWI 797

RESULT 132
US-10-145-016A-169
; Sequence 169, Application US/10145016A
; Publication No. US20030203433A1
; GENERAL INFORMATION:
; APPLICANT: Ashkenazi, Avi
; APPLICANT: Baker Kevin P.
; APPLICANT: Bostein, David
; APPLICANT: Desnoyers, Luc
; APPLICANT: Eaton, Dan
; APPLICANT: Ferrara, Napoleon
; APPLICANT: Filvaroff, Ellen
; APPLICANT: Fong, Sherman
; APPLICANT: Gao, Wei-Qiang
; APPLICANT: Getzler, Hanspeter
; APPLICANT: Gerritsen, Mary E.
; APPLICANT: Goddard, Audrey
; APPLICANT: Godowski, Paul J.
; APPLICANT: Grimaldi, J. Christopher
; APPLICANT: Gurney, Austin L.
; APPLICANT: Hillan, Kenneth J.
; APPLICANT: Kijavini, Ivar J.
; APPLICANT: Kuo, Sophia S.
; APPLICANT: Napier, Mary A.
; APPLICANT: Pan, James;
; APPLICANT: Paoni, Nicholas F.
; APPLICANT: Roy, Margaret Ann
; APPLICANT: Shelton, David L.
; APPLICANT: Stewart, Timothy A.
; APPLICANT: Tumas, Daniel
; APPLICANT: Williams, P. Mickey
; APPLICANT: Wood, William I.
; TITLE OF INVENTION: Secreted and Transmembrane Polypeptides and Nucleic
; FILE REFERENCE: P2630PIC52
; CURRENT APPLICATION NUMBER: US/10/145,016A
; PRIOR FILING DATE: 2001-10-18
; PRIOR APPLICATION NUMBER: 09/918585
; PRIOR FILING DATE: 2001-07-30
; PRIOR APPLICATION NUMBER: 60/062250
; PRIOR FILING DATE: 1997-10-17
; PRIOR APPLICATION NUMBER: 60/064249
; PRIOR FILING DATE: 1997-11-03
; PRIOR APPLICATION NUMBER: 60/065311
; PRIOR FILING DATE: 1997-11-13
; PRIOR APPLICATION NUMBER: 60/066364
; PRIOR FILING DATE: 1997-11-21
; PRIOR APPLICATION NUMBER: 60/077450
; PRIOR FILING DATE: 1998-03-10
; PRIOR APPLICATION NUMBER: 60/077632
; PRIOR FILING DATE: 1998-03-11
; PRIOR APPLICATION NUMBER: 60/077641
; PRIOR FILING DATE: 1998-03-11
; PRIOR APPLICATION NUMBER: 60/077649
; PRIOR FILING DATE: 1998-03-11
; PRIOR APPLICATION NUMBER: 60/077791
; PRIOR FILING DATE: 1998-03-12
; Remaining Prior Application data removed - See File Wrapper or PALM.
; NUMBER OF SEQ ID NOS: 624
; SEQ ID NO 169
; LENGTH: 802
; TYPE: PRT
; ORGANISM: Homo sapiens
; US-10-145-016A-169

```

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PRIORITY APPLICATION NUMBER: 60/062250
PRIORITY FILING DATE: 1997-10-17
PRIORITY APPLICATION NUMBER: 60/064249
PRIORITY FILING DATE: 1997-11-03
PRIORITY APPLICATION NUMBER: 60/065311
PRIORITY FILING DATE: 1997-11-13
PRIORITY APPLICATION NUMBER: 60/066364
PRIORITY FILING DATE: 1997-11-21
PRIORITY APPLICATION NUMBER: 60/077450
PRIORITY FILING DATE: 1998-03-10
PRIORITY APPLICATION NUMBER: 60/077632
PRIORITY FILING DATE: 1998-03-11
PRIORITY APPLICATION NUMBER: 60/077641
PRIORITY FILING DATE: 1998-03-11
PRIORITY APPLICATION NUMBER: 60/077649
PRIORITY FILING DATE: 1998-03-11
PRIORITY APPLICATION NUMBER: 60/077991
PRIORITY FILING DATE: 1998-03-12
Remaining Prior Application data removed - See file Wrapper or PALM.
NUMBER OF SEQ ID NOS: 624
SEQ ID NO 169
LENGTH: 802
TYPE: PRT
ORGANISM: Homo sapiens
US-10-145-008A-169

Query Match          20.2%; Score 470; DB 12; Length 802;
Best Local Similarity 33.4%; Pred. No. 2,5e-31;
Matches 124; Conservative 52; Mismatches 145; Indels 54; Gaps 18

QY 58 PQAS--LCCGATCIC--GGIGSFCCDCRSGMGRCFCOREVSFLNCSLDNGGCTHYCLER 112
DB 448 PCEEFELCSWNGLCVPCBQVVK---DCPNGLDERVCYCRATF-QCKDS---ICISLPK 499
QY 113 VGMRRSCAPAGTKGIDLQCHPAVKPCGRPWKMKKKSHLK-----RDTG 160
DB 500 V---CDGQPDGANGSDEEQCEGV--PCGFTFQCE-DRSCVAKPNPQCDGRPDGDGS 552
QY 161 DQE-----DQVDRLLIDGKTRRGDPSMOWVLDDSKKYLCAVLIHNSWLTAAACMD 214
DB 553 DEHQDCGQLGGPSSRIYGVGANSBEGEMWQ-ASLQVRGSHICGALIDRWITTAHQFQ 611
QY 215 ESKKLIVRLGEYDILR--WE--KM--ELDDIKEVFVHPNYSKSTTNDIDALHIAQPTL 269
DB 612 EDMSASTVLTWTFGLQKWNQSRWPCBVSFKVSRLLHPYHEHSDHDVVALQLDHPVVR 671
QY 270 SCQTVPLCLPDSGAELKELINQAQGLTITGWSHRSREKAKRRRTVLFIKIPVPHN 329
DB 672 SAARPVCLP---ARSHFEPELHCWITGNG--ALRBGQPLSN--ALQKDVQDLIQD 722
QY 330 ECSSWMSNMWSENMICAGIILGDRODACGDSGGSPMYA-SFHGTWFLVGLVWSGSCGLH 388
DB 723 LGSARVRYQYTPRMLCGAVYKKKQKQACCGSGPVLCKALSGRWFLAGLVSMGLCGRPN 782
QY 389 NYGYTVKYSRIYDI 403
DB 783 YFGVYTRITGVISWT 797

RESULT 134
US-10-145-0092A-169
Sequence 169, Application US/10145092A
Publication No. US20030203435A1
GENERAL INFORMATION:
APPLICANT: Ashkenazi, Avi
APPLICANT: Baker Kevin P.
APPLICANT: Botstein, David
APPLICANT: Desnoyers, Luc
APPLICANT: Eaton, Den
APPLICANT: Ferrara, Napoleon
APPLICANT: Filvaroff, Ellen
APPLICANT: Fong, Sherman
APPLICANT: Gao, Wei-Qiang

```



```

Query Match      20.2%; Score 470; DB 12; Length 802;
Best Local Similarity 33.1%; Pred. No. 2.5e-11;
Matches 124; Conservative 52; Mismatches 145; Indels 54; Gaps 18

QY      53 PQAS--LGGHGTCT---DGIGSPSCDGRSMWEGRCQREVSFLNCSLDGGCTHYGLER 112
      |||  |||  |||  |||  |||  |||  |||  |||  |||  |||  |||  |||  |||  |||  |||
Db      448 PPGEEFLCSVWDLCTPVCQGVK---DDPNLDERKVCGRATF--QCKEDS---TCTSLPK 439

QY      113 VGNRRSCAPGKLTGDDLLQCPHAYKPPGGRPMKMEKKKRSHLK-----RDTE 160
      |||  |||  |||  |||  |||  |||  |||  |||  |||  |||  |||  |||  |||  |||
Db      500 V--CDGQPDICNGSBECCQGV--PCGPTFTGCE--DRECVKRPQCQGRPDCKDGS 552

QY      161 DOE-----DYVDRELLIDGKMPRGDSSPMQVLLIDSKKTLACGALVHPHSWTLTAACMD 214
      |||  |||  |||  |||  |||  |||  |||  |||  |||  |||  |||  |||  |||  |||
Db      553 DEHPCOQGLQSSSRIVGAVSSBEGEMWQ--ASLQVRGHH OGALLAARWITTAACQFO 611

QY      215 ESKKLAVRAGEVDLKR--WR--KW--ELDDLDKLVYFNHPYKASTINDVLTALLHAQRPVL 269
      |||  |||  |||  |||  |||  |||  |||  |||  |||  |||  |||  |||  |||  |||
Db      612 EDMSASTVMTVTFGLGKRWQMSRPBVSFKFSRLRLAHFHEHSDHLDVVALQLQHNPRVR 671

QY      270 SQITVPICTPDGSLAERELNQAGQETLLVTGNGVHSSREKXKAKRRTFTVINFKIPVPHN 329
      |||  |||  |||  |||  |||  |||  |||  |||  |||  |||  |||  |||  |||  |||

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Db 672 SAAYRPFVCLP-----ARSHFFEEFGALCWTQWG--ALRBSGDISN---ALQKVDVLLPQD 742
QY 330 ECEWSMWSBENMLCAGLIGLRQACRSGSGGPMVA-SFGCTFLVLGYLWSMGEGCGJLH 388
Db 723 LCEANRYQIVPRPLCAGYKRGKAKDQCGDSGGPLVCALSGRNFPLAGLYVSMGLCGGRPN 782
QY 389 NGCVYTKVSRYLDMI 403
Db 783 YFGVYTRIRIGVLSWI 797

RESULT 135
US-10-145-129A-169
Sequence 169, Application US/10145129A
Publication No. US20030203436A1
GENERAL INFORMATION:
APPLICANT: Ashkenazi, Avi
APPLICANT: Baker Kevin P.
APPLICANT: Bostein, David
APPLICANT: Desnoyers, Luc
APPLICANT: Eaton, Dan
APPLICANT: Ferrara, Napoleon
APPLICANT: Filvaroff, Ellen
APPLICANT: Fong, Sherman
APPLICANT: Gao, Wei-Qiang
APPLICANT: Gerber, Hanspeter
APPLICANT: Gerritsen, Mary E.
APPLICANT: Goddard, Audrey
APPLICANT: Godowski, Paul J.
APPLICANT: Grimaldi, J. Christopher
APPLICANT: Gurney, Austin L.
APPLICANT: Hillan, Kenneth J.
APPLICANT: Kljavin, Ivar J.
APPLICANT: Kuo, Sophia S.
APPLICANT: Napier, Mary A.
APPLICANT: Pan, James:
APPLICANT: Paoni, Nicholas F.
APPLICANT: Roy, Margaret Ann
APPLICANT: Shelton, David L.
APPLICANT: Stewart, Timothy A.
APPLICANT: Tumas, Daniel
APPLICANT: Williams, P. Mickey
APPLICANT: Wood, William I.
TITLE OF INVENTION: Secreted and Transmembrane Polypeptides and Nucleic
ACIDS
FILE REFERENCE: P2630P1C51
CURRENT APPLICATION NUMBER: US/10/145,129A
CURRENT FILING DATE: 2002-10-10
PRIORITY APPLICATION NUMBER: 09/918585
PRIORITY FILING DATE: 2001-07-30
PRIORITY APPLICATION NUMBER: 60/062250
PRIORITY FILING DATE: 1997-10-17
PRIORITY APPLICATION NUMBER: 60/064249
PRIORITY FILING DATE: 1997-11-03
PRIORITY APPLICATION NUMBER: 60/065311
PRIORITY FILING DATE: 1997-11-13
PRIORITY APPLICATION NUMBER: 60/066364
PRIORITY FILING DATE: 1997-11-21
PRIORITY APPLICATION NUMBER: 60/077450
PRIORITY FILING DATE: 1998-03-10
PRIORITY APPLICATION NUMBER: 60/077632
PRIORITY FILING DATE: 1998-03-11
PRIORITY APPLICATION NUMBER: 60/077641
PRIORITY FILING DATE: 1998-03-11
PRIORITY APPLICATION NUMBER: 60/077649
PRIORITY FILING DATE: 1998-03-11
PRIORITY APPLICATION NUMBER: 60/077791
PRIORITY FILING DATE: 1998-03-12
Remaining Prior Application data removed - See file Wrapper or PALM.
SEQUENCE OF SEQ ID NOS: 624
LENGTH: 802
TYPE: PRT

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ORGANISM: Homo sapiens
US-10-145-129A-169

Query Match 20.2%; Score 470; DB 12; Length 802;
Best Local Similarity 33.1%; Pred. No. 2.5e-31;
Matches 124; Conservative 52; Mismatches 145; Indels 54; Gaps 18;

QY 58 PCAS--LCGGGTCT--DGISSFCDCRSGMGEGRFCOREVSLNCSLDNGGCTHYCEE 112
DB 448 PCGEFLCSVNLGVPCDGVK---DCPNGLDERNCVCRATF-QCKEDS---TCISLPK 499
QY 113 VGMRRCSGAPRYKGDLLQCHPAKFKPCGRPKRKKRSHLK-----RDTE 160
DB 500 V-----CDGQPCDCLNGSDERCCQBGV--PCGTFTFQCE-DRSCVKKPNQDCGRPDRCRGS 552
QY 161 DOE-----DQVDPRLIDGKMTRRGDSFMQVVLDSKKKLAGAVLHPHSMVLTAAHCD 214
DB 553 DEHDCDGLQGPSSRLVGVAVSSBEMPMQ-ASLQVRGHHIOGALLADSMVITAAHCFQ 611
QY 215 ESKLLVRLSEYDLRR-WE--KW--ELDLDIKEVPVHPVNSKSTTNDIALHLAQPATL 269
DB 612 EDSMASTVMTVFLGKVMQNSRMPGEVSFKVSRLLHPHYHEDSHDYDVALQLDHPVVR 671
QY 270 SQTIVICLTPSGLAERLNOGGETLVTMGYSRREKAKRRTVNLFIKIPVPHN 329
DB 672 SAAYRVCPL---ASHFFEPGLHCWITGMG--ALREGGPISN--ALQKDVOLIPD 722
QY 330 ECEVMSNMVSENNLCAGILGDRDACEGSDGGPMVA-SFHGTFTVLGVSMGEGCGLLH 388
DB 723 LCESAVRYQVTPRMLCAGYRKKGKDAQCGDSGSPVLCALSGRFLAGLVSMGLCCGPN 782
QY 389 NGGYTKVSKRYLWMI 403
DB 783 YFGVYTRITGVISMI 797

RESULT 136

US-10-165-038A-169
Sequence 169, Application US/10165038A
Publication No. US20030203441A1

GENERAL INFORMATION:

APPLICANT: Ashkenazi, Avi
APPLICANT: Baker Kevin P.
APPLICANT: Botstein, David
APPLICANT: Deenoyers, Luc
APPLICANT: Eaton, Dan
APPLICANT: Ferrara, Napoleon
APPLICANT: Filvaroff, Ellen
APPLICANT: Fong, Sherman
APPLICANT: Gao, Wei-Qiang
APPLICANT: Gerber, Hanspeter
APPLICANT: Gerlitsen, Mary E.
APPLICANT: Goddard, Audrey
APPLICANT: Godowski, Paul J.
APPLICANT: Grimaldi, J. Christopher
APPLICANT: Gurney, Austin L.
APPLICANT: Hillan, Kenneth J.
APPLICANT: Kijavyn, Ivar J.
APPLICANT: Kuo, Sophia S.
APPLICANT: Napier, Mary A.
APPLICANT: Paoni, Nicholas F.
APPLICANT: Roy, Margaret Ann
APPLICANT: Shelton, David L.
APPLICANT: Stewart, Timothy A.
APPLICANT: Tumas, Daniel
APPLICANT: Tumas, William I.
APPLICANT: Williams, P. Mickey
TITLE OF INVENTION: Secreted and Transmembrane Polypeptides and Nucleic
FILE REFERENCE: P630P1C29
CURRENT APPLICATION NUMBER: US/10/165, 038A
CURRENT FILING DATE: 2002-10-10

PRIOR APPLICATION NUMBER: 09/918585
PRIOR FILING DATE: 2001-07-30
PRIOR APPLICATION NUMBER: 60/062250
PRIOR FILING DATE: 1997-10-17
PRIOR APPLICATION NUMBER: 60/054249
PRIOR FILING DATE: 1997-11-03
PRIOR APPLICATION NUMBER: 60/065311
PRIOR FILING DATE: 1997-11-13
PRIOR APPLICATION NUMBER: 60/066364
PRIOR FILING DATE: 1997-11-21
PRIOR APPLICATION NUMBER: 60/077450
PRIOR FILING DATE: 1998-03-10
PRIOR APPLICATION NUMBER: 60/077632
PRIOR FILING DATE: 1998-03-11
PRIOR APPLICATION NUMBER: 60/077641
PRIOR FILING DATE: 1998-03-11
PRIOR APPLICATION NUMBER: 60/077649
PRIOR FILING DATE: 1998-03-11
PRIOR APPLICATION NUMBER: 60/077791
PRIOR FILING DATE: 1998-03-12
REMAINING PRIOR APPLICATION data removed - See File Wrapper or PALM.
NUMBER OF SEQ ID NOS: 624
SEQ ID NO 169
LENGTH: 802
TYPE: PRT
ORGANISM: Homo sapiens
US-10-165-038A-169

Query Match 20.2%; Score 470; DB 12; Length 802;
Best Local Similarity 33.1%; Pred. No. 2.5e-31;
Matches 124; Conservative 52; Mismatches 145; Indels 54; Gaps 18;

QY 58 PCAS--LCGGGTCT--DGISSFCDCRSGMGEGRFCOREVSLNCSLDNGGCTHYCEE 112
DB 448 PCGEFLCSVNLGVPCDGVK---DCPNGLDERNCVCRATF-QCKEDS---TCISLPK 499
QY 113 VGMRRCSGAPRYKGDLLQCHPAKFKPCGRPKRKKRSHLK-----RDTE 160
DB 500 V-----CDGQPCDCLNGSDERCCQBGV--PCGTFTFQCE-DRSCVKKPNQDCGRPDRCRGS 552
QY 161 DOE-----DQVDPRLIDGKMTRRGDSFMQVVLDSKKKLAGAVLHPHSMVLTAAHCD 214
DB 553 DEHDCDGLQGPSSRLVGVAVSSBEMPMQ-ASLQVRGHHIOGALLADSMVITAAHCFQ 611
QY 215 ESKLLVRLSEYDLRR-WE--KW--ELDLDIKEVPVHPVNSKSTTNDIALHLAQPATL 269
DB 612 EDSMASTVMTVFLGKVMQNSRMPGEVSFKVSRLLHPHYHEDSHDYDVALQLDHPVVR 671
QY 270 SQTIVICLTPSGLAERLNOGGETLVTMGYSRREKAKRRTVNLFIKIPVPHN 329
DB 672 SAAYRVCPL---ASHFFEPGLHCWITGMG--ALREGGPISN--ALQKDVOLIPD 722
QY 330 ECEVMSNMVSENNLCAGILGDRDACEGSDGGPMVA-SFHGTFTVLGVSMGEGCGLLH 388
DB 723 LCESAVRYQVTPRMLCAGYRKKGKDAQCGDSGSPVLCALSGRFLAGLVSMGLCCGPN 782
QY 389 NGGYTKVSKRYLWMI 403
DB 783 YFGVYTRITGVISMI 797

RESULT 137

US-10-165-353A-169
Sequence 169, Application US/10165353A
Publication No. US20030203442A1

GENERAL INFORMATION:

APPLICANT: Ashkenazi, Avi
APPLICANT: Baker Kevin P.
APPLICANT: Botstein, David
APPLICANT: Deenoyers, Luc
APPLICANT: Eaton, Dan
APPLICANT: Ferrara, Napoleon
APPLICANT: Filvaroff, Ellen

```
APPLICANT: Fong, Sherman
APPLICANT: Gao, Wei-Qiang
APPLICANT: Gerber, Hanspeter
APPLICANT: Geritsen, Mary E.
APPLICANT: Goddard, Audrey
APPLICANT: Godowski, Paul J.
APPLICANT: Grimaldi, J. Christopher
APPLICANT: Guiney, Austin L.
APPLICANT: Hillan, Kenneth J.
APPLICANT: Kljavin, Ivar J.
APPLICANT: Kuo, Sophia S.
APPLICANT: Napier, Mary A.
APPLICANT: Pan, James
APPLICANT: Paoni, Nicholas F.
APPLICANT: Roy, Margaret Ann
APPLICANT: Shelton, David L.
APPLICANT: Stewart, Timothy A.
APPLICANT: Tumas, Daniel
APPLICANT: Williams, P. Mickey
APPLICANT: Wood, William I.
TITLE OF INVENTION: Secreted and Transmembrane Polypeptides and Nucleic
FILE REFERENCE: P2630PIC40
CURRENT APPLICATION NUMBER: US/10/165,353A
PRIOR FILING DATE: 2001-07-30
PRIOR APPLICATION NUMBER: 60/062250
PRIOR FILING DATE: 1997-10-17
PRIOR APPLICATION NUMBER: 60/064249
PRIOR FILING DATE: 1997-11-03
PRIOR APPLICATION NUMBER: 60/065311
PRIOR FILING DATE: 1997-11-13
PRIOR APPLICATION NUMBER: 60/066364
PRIOR FILING DATE: 1997-11-21
PRIOR APPLICATION NUMBER: 60/077450
PRIOR FILING DATE: 1998-03-10
PRIOR APPLICATION NUMBER: 60/077632
PRIOR FILING DATE: 1998-03-11
PRIOR APPLICATION NUMBER: 60/077641
PRIOR FILING DATE: 1998-03-11
PRIOR APPLICATION NUMBER: 60/077649
PRIOR FILING DATE: 1998-03-11
PRIOR APPLICATION NUMBER: 60/077791
PRIOR FILING DATE: 1998-03-12
Remaining Prior Application data removed - See File Wrapper or PALM.
NUMBER OF SEQ ID NOS: 624
SEQ ID NO 169
LENGTH: 802
TYPE: PRT
ORGANISM: Homo sapiens
US-10-165-353A-169

Query Match          20.2% Score 470; DB 12; Length 802;
Best Local Similarity 33.1%; Pred. No. 2.5e-31;
Matches 124; Conservative 52; Mismatches 145; Indels 54; Gaps 18;

QY 58 PCAG--LCGSHGTCT---DGIAGSCDCCKSGMEKGFQCRREVSFLNLSLNGSCHYGLAE 112
DB 448 PCPEFLCIVNGLCPVACDGVK---DCPFGIDENKVCGRATP--TCISLPK 499
QY 113 VGNMRSCAPGYKLGADLLQCHFAVPCGSRPMKMEKRSHTK-----RDTE 160
DB 500 V-----CDGQPCDCLANGDEBQCOBEV--PCTTFPQCF--DRSCVKKRNPQCDGRDPCBGS 552
QY 161 DGE-----DQVDPRLIDGKTRRGDSFMQVVLNDSKKKLAOGAVLIHESWLTAAACMD 214
DB 553 DEHGDGGLQGPSSRIVGAVSSGEWPMQ--ASLQVRGRHTOGGALLADRWVITAAHCTQ 611
QY 215 ESKKILVLEGEYDLR--RW--KMD--ELDDIKKVFVHNYSKSTTNDUALHLAQPKL 269
DB 612 EDMSASTVLTWTFELGKVMQNSRWPEVSEFVSHLLDHPHEHSDHYDALQLDHPVVR 671
```

```
QY 270 SQTIVPICDPSGLAERELNQAQETLYTGWGYSSEKEAKNRTFVNIKIPVPEH 329
DB 672 SAARVCLP-----ARSHPEPGLHNTITNG--ALREGGPISN---ALQKVDVQLIPQD 722
QY 330 ECSEVMNSMNSNMICAGILGDRQDCBDSGSGPMVA-STHGTWPLVGLVNSGSGGLAH 388
DB 723 LCSBAVRYGVTPRMLCAGYRKRGKDCACQDSGGLVCKALSGRWPLAGLVSWGLGCGRPM 782
QY 369 NYGYTKTSRYLDWT 403
DB 783 YFGVYTKITGVISWL 797

RESULT 138
US-10-167-600-169
Sequence 169, Application US/10167600
Publication No. US20030203443A1
GENERAL INFORMATION:
APPLICANT: Ashkenazi, Avi
APPLICANT: Baker Kevin P.
APPLICANT: Botstein, David
APPLICANT: Deonofers, Luc
APPLICANT: Eaton, Dan
APPLICANT: Perrara, Napoleon
APPLICANT: Pilvaroff, Ellen
APPLICANT: Pong, Sherman
APPLICANT: Gao, Wei-Qiang
APPLICANT: Gerber, Hanspeter
APPLICANT: Geritsen, Mary E.
APPLICANT: Goddard, Audrey
APPLICANT: Godowski, Paul J.
APPLICANT: Grimaldi, J. Christopher
APPLICANT: Guiney, Austin L.
APPLICANT: Hillan, Kenneth J.
APPLICANT: Kljavin, Ivar J.
APPLICANT: Kuo, Sophia S.
APPLICANT: Napier, Mary A.
APPLICANT: Pan, James
APPLICANT: Paoni, Nicholas F.
APPLICANT: Roy, Margaret Ann
APPLICANT: Shelton, David L.
APPLICANT: Stewart, Timothy A.
APPLICANT: Tumas, Daniel
APPLICANT: Williams, P. Mickey
APPLICANT: Wood, William I.
TITLE OF INVENTION: Secreted and Transmembrane Polypeptides and Nucleic
FILE REFERENCE: P2630PIC35
CURRENT APPLICATION NUMBER: US/10/167,600
PRIOR FILING DATE: 2002-12-10
PRIOR APPLICATION NUMBER: 09/918585
PRIOR FILING DATE: 2001-07-30
PRIOR APPLICATION NUMBER: 60/062250
PRIOR FILING DATE: 1997-10-17
PRIOR APPLICATION NUMBER: 60/064249
PRIOR FILING DATE: 1997-11-03
PRIOR APPLICATION NUMBER: 60/065311
PRIOR FILING DATE: 1997-11-13
PRIOR APPLICATION NUMBER: 60/066364
PRIOR FILING DATE: 1997-11-21
PRIOR APPLICATION NUMBER: 60/077450
PRIOR FILING DATE: 1998-03-10
PRIOR APPLICATION NUMBER: 60/077632
PRIOR FILING DATE: 1998-03-11
PRIOR APPLICATION NUMBER: 60/077641
PRIOR FILING DATE: 1998-03-11
PRIOR APPLICATION NUMBER: 60/077649
PRIOR FILING DATE: 1998-03-11
PRIOR APPLICATION NUMBER: 60/077791
PRIOR FILING DATE: 1998-03-12
Remaining Prior Application data removed - See File Wrapper or PALM.
NUMBER OF SEQ ID NOS: 624
SEQ ID NO 169
```



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D0 612 EDMSASTVMTLVFVZKAWQVSSWPEVSVFKVSLRLLHPHEEDSHDYVALQLOJHPVPR 671
OY 210 SCQITVVICPDSGLAEHNLNQGCELTVTGNGVSHSREKXANRRRTVAINFIKIPVPHN 328
Db 672 SAAAREPVCIP---ASHFPEPELHCWITG--ALREGGPISN--ALOKVQVLIIPD 722
OY 330 ECSEVSNVNVSNHNLICGLIGRQDACEJSGGPMVA-SFHGTFLVGLVSGEGCGLLH 388
Db 723 LCSARVRYQVTRHMLCNGYKXKXKQKQACGSDGSPVCKMLSGRPWTLGIVSWGLGGRPN 782
OY 389 NYGVYTKVSRVYLDNI 403
Db 783 YFGVYTRITGVISWI 797

RESULT 141
US-10-210-028-169
Sequence 169, Application US/10210028
Publication No. US20030203446A1
GENERAL INFORMATION:
APPLICANT: Ashkenazi, Avi
APPLICANT: Baker Kevin P.
APPLICANT: Botstein, David
APPLICANT: Deenoyers, Luc
APPLICANT: Eaton, Dan
APPLICANT: Ferrara, Napoleon
APPLICANT: Filvaroff, Ellen
APPLICANT: Fong, Sherman
APPLICANT: Gao, Wei-Qiang
APPLICANT: Gerber, Hanspeter
APPLICANT: Gertlisen, Mary E.
APPLICANT: Goddard, Audrey
APPLICANT: Godowski, Paul J.
APPLICANT: Grimaldi, J. Christopher
APPLICANT: Gurney, Austin L.
APPLICANT: Hillan, Kenneth J
APPLICANT: Kijavlin, Iyar U.
APPLICANT: Kuo, Sophia S.
APPLICANT: Napier, Mary A.
APPLICANT: Pan, James;
APPLICANT: Paoni, Nicholas F.
APPLICANT: Roy, Margaret Ann
APPLICANT: Shelton, David L.
APPLICANT: Stewart, Timothy A.
APPLICANT: Tumas, Daniel
APPLICANT: Williams, P. Mickey
APPLICANT: Wood, William I.
TITLE OF INVENTION: Secreted and Transmembrane Polypeptides and Nucleic
TITLE OF INVENTION: Acids Encoding the Same
FILE REFERENCE: P2630FIC52
CURRENT APPLICATION NUMBER: US/10/210,028
PRIOR APPLICATION NUMBER: 2001-10-18
PRIOR APPLICATION NUMBER: 09/918585
PRIOR FILING DATE: 2001-07-30
PRIOR APPLICATION NUMBER: 60/062250
PRIOR FILING DATE: 1997-10-17
PRIOR APPLICATION NUMBER: 60/064249
PRIOR FILING DATE: 1997-11-03
PRIOR APPLICATION NUMBER: 60/065311
PRIOR FILING DATE: 1997-11-13
PRIOR APPLICATION NUMBER: 60/066364
PRIOR FILING DATE: 1997-11-21
PRIOR APPLICATION NUMBER: 60/077450
PRIOR FILING DATE: 1998-03-10
PRIOR APPLICATION NUMBER: 60/077632
PRIOR FILING DATE: 1998-03-11
PRIOR APPLICATION NUMBER: 60/077641
PRIOR FILING DATE: 1998-03-11
PRIOR APPLICATION NUMBER: 60/077649
PRIOR FILING DATE: 1998-03-11
PRIOR APPLICATION NUMBER: 60/077791
PRIOR FILING DATE: 1998-03-12
Prior Application data removed - See File Wrapper or PALM.

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NUMBER OF SEQ ID NOS: 624
 ; SEQ ID NO: 169
 ; LENGTH: 802
 ; TYPE: PRT
 ; ORGANISM: Homo sapiens
 ; US-10-210-028-169

Query Match 20.2%; Score 470; DB 12; Length 802;

Best Local Similarity 33.1%; Pred. No. 2.5e-31;
 Matches 124; Conservative 52; Mismatches 145; Indels 54; Gaps 18;

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QY 58 PCAS--LCCGHTCT---DGISSFCDCRSWEGRCQREVSFLNGLDNGGCTHYCLEE 112
DB 448 PCGEFLCSVNGLCVPACDGVK---DCPNGLDBRNCVCRAFT-QCKEDS---TCISLPK 499
QY 113 VGMRCSCAPGYKLGDDLLQCHPAVKPCGRPMKMEKKRSHLK-----RDTE 160
DB 500 V---CDGQPDCLNGSDDEQCQBGV--PCGTFTPOCE-DRCVKKRPNQCDGRPDGRGS 552
QY 161 DOE-----DQVDPRLIDKMTBRGDSPMQVLLDSKKKLACGAVLHPSWVLTAAHCMD 214
DB 553 DEHDCGCLQGPSRIVGVANSSBGEWPMQ-ASLQVRGRHICGALILADRWTITAAHCFQ 611
QY 215 ESKKLLVRLGEYDRLR-WE--KWLDDLDKEVFNPNYSKSTDDNDIALHLAQPATL 269
DB 612 EDMSASTVMTVFLGKWMQNSRPGEVSFKVSRLLHPYHEDSHDYDVALLDHPVVR 671
QY 270 SQTIVPCLPDSGLARELNQAGETLVTCWGHSSREKARNTVNLFIKIPVPHN 329
DB 672 SAAYRVCPLP---ARSHFEFEGHICWITGMG--ALREGGPISN--ALQKVDVQLIPQD 722
QY 330 ECSEVSNKVSSENLGCGILIDRODACEGDSGGPMVA-SFHGTWFLVGLVSWGEGGGLH 388
DB 723 LCEAAYRYQVTPRMLCAGYRKAKKDCQDSGGLVCALSGRWLADLVSWGLGCGRPN 782
QY 389 NGVYTKVSRYLDMT 403
DB 783 YFGVYTRITGVISWI 797

```

RESULT 142
 ; US-10-017-081A-169
 ; Sequence 169, Application US/10017081A
 ; Publication No. US20030049684A1
 ; GENERAL INFORMATION:
 ; APPLICANT: Ashkenazi, Avi
 ; APPLICANT: Baker Kevin P.
 ; APPLICANT: Botstein, David
 ; APPLICANT: Desnoyers, Luc
 ; APPLICANT: Eaton, Dan
 ; APPLICANT: Ferrara, Napoleon
 ; APPLICANT: Filvaroff, Ellen
 ; APPLICANT: Hong, Sherman
 ; APPLICANT: Gao, Wei-Qiang
 ; APPLICANT: Gerber, Hanspeter
 ; APPLICANT: Geritsen, Mary E.
 ; APPLICANT: Goddard, Audrey
 ; APPLICANT: Godowski, Paul J.
 ; APPLICANT: Grimaldi, J. Christopher
 ; APPLICANT: Gurney, Austin J.
 ; APPLICANT: Hillan, Kenneth J.
 ; APPLICANT: Kijavlin, Ivar J.
 ; APPLICANT: Kuo, Sophia S.
 ; APPLICANT: Napier, Mary A.
 ; APPLICANT: Pan, James
 ; APPLICANT: Paoni, Nicholas F.
 ; APPLICANT: Roy, Margaret Ann
 ; APPLICANT: Shelton, David L.
 ; APPLICANT: Stewart, Timothy A.
 ; APPLICANT: Tumaas, Daniel
 ; APPLICANT: Williams, P. Mickey
 ; APPLICANT: Wood, William I.
 ; TITLE OF INVENTION: Secreted and Transmembrane Polypeptides and Nucleic

TITLE OF INVENTION: Acids Encoding the Same
 ; FILE REFERENCE: P2630PIC69
 ; CURRENT APPLICATION NUMBER: US/10/017,081A
 ; CURRENT FILING DATE: 2002-04-30
 ; Prior application removed - See file wrapper or Palm
 ; NUMBER OF SEQ ID NOS: 624
 ; SEQ ID NO: 169
 ; LENGTH: 802
 ; TYPE: PRT
 ; ORGANISM: Homo sapiens
 ; US-10-017-081A-169

Query Match 20.2%; Score 470; DB 14; Length 802;

Best Local Similarity 33.1%; Pred. No. 2.5e-31;
 Matches 124; Conservative 52; Mismatches 145; Indels 54; Gaps 18;

```

QY 58 PCAS--LCCGHTCT---DGISSFCDCRSWEGRCQREVSFLNGLDNGGCTHYCLEE 112
DB 448 PCGEFLCSVNGLCVPACDGVK---DCPNGLDBRNCVCRAFT-QCKEDS---TCISLPK 499
QY 113 VGMRCSCAPGYKLGDDLLQCHPAVKPCGRPMKMEKKRSHLK-----RDTE 160
DB 500 V---CDGQPDCLNGSDDEQCQBGV--PCGTFTPOCE-DRCVKKRPNQCDGRPDGRGS 552
QY 161 DOE-----DQVDPRLIDKMTBRGDSPMQVLLDSKKKLACGAVLHPSWVLTAAHCMD 214
DB 553 DEHDCGCLQGPSRIVGVANSSBGEWPMQ-ASLQVRGRHICGALILADRWTITAAHCFQ 611
QY 215 ESKKLLVRLGEYDRLR-WE--KWLDDLDKEVFNPNYSKSTDDNDIALHLAQPATL 269
DB 612 EDMSASTVMTVFLGKWMQNSRPGEVSFKVSRLLHPYHEDSHDYDVALLDHPVVR 671
QY 270 SQTIVPCLPDSGLARELNQAGETLVTCWGHSSREKARNTVNLFIKIPVPHN 329
DB 672 SAAYRVCPLP---ARSHFEFEGHICWITGMG--ALREGGPISN--ALQKVDVQLIPQD 722
QY 330 ECSEVSNKVSSENLGCGILIDRODACEGDSGGPMVA-SFHGTWFLVGLVSWGEGGGLH 388
DB 723 LCEAAYRYQVTPRMLCAGYRKAKKDCQDSGGLVCALSGRWLADLVSWGLGCGRPN 782
QY 389 NGVYTKVSRYLDMT 403
DB 783 YFGVYTRITGVISWI 797

```

RESULT 143
 ; US-10-167-749-169
 ; Sequence 169, Application US/10167749
 ; Publication No. US20030036137A1
 ; GENERAL INFORMATION:
 ; APPLICANT: Ashkenazi, Avi
 ; APPLICANT: Baker Kevin P.
 ; APPLICANT: Botstein, David
 ; APPLICANT: Desnoyers, Luc
 ; APPLICANT: Eaton, Dan
 ; APPLICANT: Ferrara, Napoleon
 ; APPLICANT: Filvaroff, Ellen
 ; APPLICANT: Hong, Sherman
 ; APPLICANT: Gao, Wei-Qiang
 ; APPLICANT: Gerber, Hanspeter
 ; APPLICANT: Geritsen, Mary E.
 ; APPLICANT: Goddard, Audrey
 ; APPLICANT: Godowski, Paul J.
 ; APPLICANT: Grimaldi, J. Christopher
 ; APPLICANT: Gurney, Austin J.
 ; APPLICANT: Hillan, Kenneth J.
 ; APPLICANT: Kijavlin, Ivar J.
 ; APPLICANT: Kuo, Sophia S.
 ; APPLICANT: Napier, Mary A.
 ; APPLICANT: Pan, James
 ; APPLICANT: Paoni, Nicholas F.
 ; APPLICANT: Roy, Margaret Ann
 ; APPLICANT: Shelton, David L.

```

; APPLICANT: Stewart, Timothy A.
; APPLICANT: Tumas, Daniel
; APPLICANT: Williams, P. Mickey
; APPLICANT: Wood, William I.
; TITLE OF INVENTION: Secreted and Transmembrane Polypeptides and Nucleic
; FILE OF INVENTION: Acids Encoding the Same
; FILE REFERENCE: P2630P1C60
; CURRENT APPLICATION NUMBER: US/10/167,749
; CURRENT FILING DATE: 2001-10-19
; PRIOR APPLICATION NUMBER: 09/918585
; PRIOR FILING DATE: 2001-07-30
; PRIOR APPLICATION NUMBER: 60/062250
; PRIOR FILING DATE: 1997-10-17
; PRIOR APPLICATION NUMBER: 60/064249
; PRIOR FILING DATE: 1997-11-03
; PRIOR APPLICATION NUMBER: 60/065311
; PRIOR FILING DATE: 1997-11-13
; PRIOR APPLICATION NUMBER: 60/066364
; PRIOR FILING DATE: 1997-11-21
; PRIOR APPLICATION NUMBER: 60/077450
; PRIOR FILING DATE: 1998-03-10
; PRIOR APPLICATION NUMBER: 60/077632
; PRIOR FILING DATE: 1998-03-11
; PRIOR APPLICATION NUMBER: 60/077641
; PRIOR FILING DATE: 1998-03-11
; PRIOR APPLICATION NUMBER: 60/077649
; PRIOR FILING DATE: 1998-03-11
; PRIOR APPLICATION NUMBER: 60/077791
; PRIOR FILING DATE: 1998-03-12
; Remaining Prior Application data removed - See File Wrapper or PALM.
; NUMBER OF SEQ ID NOS: 624
; SEQ ID NO 169
; LENGTH: 802
; TYPE: prt
; ORGANISM: Homo sapiens
US-10-167-749-169

Query Match          20.2%; Score 470; DB 14; Length 802;
Best Local Similarity 33.1%; Pred. No. 2.5e-31;
Matches 124; Conservative 52; Mismatches 145; Indels 54; Gaps 18;

QY 58 PCAS--LCCGHTCT---DIGSFSCDCRSGMBGRFCQREVSLNCSLDNGGCTHYCLEE 112
D 448 PCGGEPLCSVNGICVPAACDGVK----DCENGLDERNCVCATP--QCKEDS---TCLSLPK 499
QY 113 VGNRRSCAPGYKCGDLLQCHYAFKPGKPMKMKRSHK-----RDTE 160
D 500 V---CDGQPDCLNGSDEQCQEGV--PGFTFTQCE-DRSCVKKPNQCDGRPDGRDS 552
QY 161 DQE-----DQVPEPLIDGKMTRGSDSPQVVLDSKKKLACGAVLIHPSVWLTAAACMD 214
D 553 DEHQOGLQGHSSSLVGAIVSSEBGMFQ--ASIQVAGRHICGMLIDRVITAAHCFQ 611
QY 215 ESKKLAVRIGETDLRR--KW--ELDIDIKYFVHPNYSKTTDNDIALIHAQFATL 269
D 612 EDMSATVMTVFLCKVQNSRWPGEVSKSRILHRHYEEDSHYVALLQIDHPPVR 671
QY 270 SQTIVPICLPSGLAEELNQAQETLVYMGYSSEKKAENRTFVNLFIKIPVYPEN 329
D 672 SAAYRVCLP-----ARSHFEFPGHWTGNG--ALMBGGPISN--ALQVNVQILIPQD 722
QY 310 ECEVSNMNVSENMLCAGILGDRQDACEGDSGCPVVA--SPHGTMFLVGLVSMGEGCGLAH 388
D 723 LCBAYRYQVTPRMICAGYRKKKDACCQDSGPLVCKALSGKWLFLAGVSMGLGCGRPV 782
QY 389 NCGYTKVSRVYDWT 403
D 783 YFGYTRITGVISWT 797

RESULT 144
US-10-013-921A-169
; Sequence 169, Application US/10013921A
```

```

; Publication No. US20030068648A1
; GENERAL INFORMATION:
; APPLICANT: Ashkenazi, Avi
; APPLICANT: Baker Kevin P.
; APPLICANT: Botstein, David
; APPLICANT: Desnoyers, Luc
; APPLICANT: Eaton, Dan
; APPLICANT: Ferrara, Napoleon
; APPLICANT: Filvaroff, Ellen
; APPLICANT: Fong, Sherman
; APPLICANT: Gao, Wei-Qiang
; APPLICANT: Gerber, Hanspeter
; APPLICANT: Gerritsen, Mary E.
; APPLICANT: Goddard, Audrey
; APPLICANT: Godowski, Paul J.
; APPLICANT: Grimaldi, J. Christopher
; APPLICANT: Gurney, Austin L.
; APPLICANT: Hillan, Kenneth J.
; APPLICANT: Kljavin, Ivar J.
; APPLICANT: Kuo, Sophia S.
; APPLICANT: Napier, Mary A.
; APPLICANT: Pan, James;
; APPLICANT: Paoni, Nicholas F.
; APPLICANT: Roy, Margaret Ann
; APPLICANT: Shelton, David L.
; APPLICANT: Stewart, Timothy A.
; APPLICANT: Tumas, Daniel
; APPLICANT: Williams, P. Mickey
; APPLICANT: Wood, William I.
; TITLE OF INVENTION: Secreted and Transmembrane Polypeptides and Nucleic
; FILE OF INVENTION: Acids Encoding the Same
; FILE REFERENCE: P2630P1C84
; CURRENT APPLICATION NUMBER: US/10/013,921A
; CURRENT FILING DATE: 2002-03-19
; PRIOR APPLICATION NUMBER: 09/918585
; PRIOR FILING DATE: 2001-07-30
; PRIOR APPLICATION NUMBER: 60/062250
; PRIOR FILING DATE: 1997-10-17
; PRIOR APPLICATION NUMBER: 60/064249
; PRIOR FILING DATE: 1997-11-03
; PRIOR APPLICATION NUMBER: 60/065311
; PRIOR FILING DATE: 1997-11-13
; PRIOR APPLICATION NUMBER: 60/066364
; PRIOR FILING DATE: 1997-11-21
; PRIOR APPLICATION NUMBER: 60/077450
; PRIOR FILING DATE: 1998-03-10
; PRIOR APPLICATION NUMBER: 60/077632
; PRIOR FILING DATE: 1998-03-11
; PRIOR APPLICATION NUMBER: 60/077641
; PRIOR FILING DATE: 1998-03-11
; PRIOR APPLICATION NUMBER: 60/077649
; PRIOR FILING DATE: 1998-03-11
; PRIOR APPLICATION NUMBER: 60/077791
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; PRIOR APPLICATION NUMBER: 60/078004
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; PRIOR APPLICATION NUMBER: 60/078866
; PRIOR FILING DATE: 1998-03-20
; PRIOR APPLICATION NUMBER: 60/078936
; PRIOR FILING DATE: 1998-03-20
; PRIOR APPLICATION NUMBER: 60/078910
; PRIOR FILING DATE: 1998-03-20
; PRIOR APPLICATION NUMBER: 60/078939
; PRIOR FILING DATE: 1998-03-20
; PRIOR APPLICATION NUMBER: 60/079294
; PRIOR FILING DATE: 1998-03-25
; PRIOR APPLICATION NUMBER: 60/079656
; PRIOR FILING DATE: 1998-03-26
; PRIOR APPLICATION NUMBER: 60/079664
; PRIOR FILING DATE: 1998-03-27
; PRIOR APPLICATION NUMBER: 60/079689
; PRIOR FILING DATE: 1998-03-27
; PRIOR APPLICATION NUMBER: 60/079663
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DB      QY      DB          PRIOR APPLICATION NUMBER: 60/083545  
        QY      PRIOR FILING DATE: 1998-04-29  
        DB      PRIOR APPLICATION NUMBER: 60/083554  
        QY      PRIOR FILING DATE: 1998-04-29  
        DB      PRIOR APPLICATION NUMBER: 60/083558  
        QY      PRIOR FILING DATE: 1998-04-29  
        DB      PRIOR APPLICATION NUMBER: 60/083559  
        QY      PRIOR FILING DATE: 1998-04-29  
        DB      PRIOR APPLICATION NUMBER: 60/083500  
        QY      PRIOR FILING DATE: 1998-04-23  
        DB      PRIOR APPLICATION NUMBER: 60/083742  
        QY      PRIOR FILING DATE: 1998-04-30  
        DB      PRIOR APPLICATION NUMBER: 60/084366  
        QY      PRIOR FILING DATE: 1998-05-05  
        DB      PRIOR APPLICATION NUMBER: 60/084414  
        QY      PRIOR FILING DATE: 1998-05-06  
        DB      PRIOR APPLICATION NUMBER: 60/084441  
        QY      PRIOR FILING DATE: 1998-05-06  
        DB      PRIOR APPLICATION NUMBER: 60/084637  
        QY      PRIOR FILING DATE: 1998-05-07  
        DB      PRIOR APPLICATION NUMBER: 60/084639  
        QY      PRIOR FILING DATE: 1998-05-07  
        DB      PRIOR APPLICATION NUMBER: 60/084640  
        QY      PRIOR FILING DATE: 1998-05-07  
        DB      PRIOR APPLICATION NUMBER: 60/084598  
        QY      PRIOR FILING DATE: 1998-05-07  
        DB      PRIOR APPLICATION NUMBER: 60/084600  
        QY      PRIOR FILING DATE: 1998-05-07  
        DB      PRIOR APPLICATION NUMBER: 60/084627  
        QY      PRIOR FILING DATE: 1998-05-07  
        DB      PRIOR APPLICATION NUMBER: 60/084643  
        QY      PRIOR FILING DATE: 1998-05-07  
        DB      PRIOR APPLICATION NUMBER: 60/085339  
        QY      PRIOR FILING DATE: 1998-05-13  
        DB      PRIOR APPLICATION NUMBER: 60/085338  
        QY      PRIOR FILING DATE: 1998-05-13  
        DB      PRIOR APPLICATION NUMBER: 60/085323  
        QY      PRIOR FILING DATE: 1998-05-13  
        DB      PRIOR APPLICATION NUMBER: 60/085582  
        QY      PRIOR FILING DATE: 1998-05-15  
        DB      PRIOR APPLICATION NUMBER: 60/085700  
        QY      PRIOR FILING DATE: 1998-05-15  
        DB      PRIOR APPLICATION NUMBER: 60/085689  
        QY      PRIOR FILING DATE: 1998-05-15  
        DB      PRIOR APPLICATION NUMBER: 60/085579  
        QY      PRIOR FILING DATE: 1998-05-15  
        DB      PRIOR APPLICATION NUMBER: 60/085580  
        QY      PRIOR FILING DATE: 1998-05-15  
        DB      PRIOR APPLICATION NUMBER: 60/085573  
        QY      PRIOR FILING DATE: 1998-05-15  
        DB      PRIOR APPLICATION NUMBER: 60/085704  
        QY      PRIOR FILING DATE: 1998-05-15  
        DB      PRIOR APPLICATION NUMBER: 60/085697
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Query Match 20; 28; Score 470; DB 14; Length 802;
Best Local Similarity 33.1%; Pred No. 2.5e+11;
Matches 124; Conservative 52; Mismatches 145; Indels 54; Gaps 18

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QY      58 PCAS--LCCGHCCTC---DGIASFSCDCRSGBMGRCFCOREVSLFNSCLNGGCCHNYCLEE 112  
       ||| |  
DB     448 PCEPGEFLCSVNGLCYRACDSGVK----DCPNGLDRNCVCRAATF-QCKEDS-----TGISLPK 499  
  
QY      113 VGNRRGSAPRYKLGGDDLLDCHPAKYPCGRPKMKREKKXSNLK-----SDTE 160  
       ||||| |  
DB     500 V---CDGPDLCLNGBSEECQEGV---PCGTTFQCE-DRESVKKENPGCGRPDCRDGS 552  
  
QY      161 DOE-----DYWDRLIDGMTRGDSSPMOVLILDSKKKLACAAGVALIHBSWYLZAAHMD 214  
       ||| |  
DB     553 DEHNOCOGIGSSSRITYGAVSSBEBWFMO_ASLDVAKNHICGALLAARMTTAACFG 611  
  
QY      215 ESKKLIVLRGETLYNR-WE-KM-EELDIKEVFVRHRYSKSTTDNDIALLAHLAQRPL 269  
       ||| |  
DB     612 EDGSAVASTLVMTFLGKTWKQNUSMBEVASKVSILLHYHEHDSDSHDYDALLDLDHPVR 671
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QY 270 SCITVPCIPDSGLAEKRLNQAQETLVGMGYSSEKREKRNFTFVNIKIPVPHN 329
Db 672 SAARFVPCIP-----ARSHFEPGHCMTGWC--ALREGGPISN---ALQKVDQLIPDO 722
QY 330 ECSEVSNMNVSENMICAGIIGDQDCCEBDSGPMVA-SHGCMFVGLVSMWEGGGLH 388
Db 723 LCSAAYRYVYTRMLCAQYRKKKKACQDSGGLVYKALSGRMFAGLVSWMGLGCGRPN 782
QY 389 NVGYTVKVSRYLDMT 403
Db 783 YEGYTRITGVISWT 797
RESULT 145
US-10-013-929A-169
; Sequence 169, Application US/10013929A
; Publication No. US2003007245A1
; GENERAL INFORMATION:
; APPLICANT: Ashkenazi, Avi
; APPLICANT: Baker Kevin P.
; APPLICANT: Botstein, David
; APPLICANT: Denoyers, Luc
; APPLICANT: Baton, Dan
; APPLICANT: Ferrara, Napoleone
; APPLICANT: Flivaroff, Ellen
; APPLICANT: Gao, Wei-Qiang
; APPLICANT: Gong, Sherman
; APPLICANT: Gerber, Hanspeter
; APPLICANT: Gerltzen, Mary E.
; APPLICANT: Goddard, Audrey
; APPLICANT: Godowski, Paul J.
; APPLICANT: Gilmaldi, J. Christopher
; APPLICANT: Gurney, Austin L.
; APPLICANT: Hillan, Kenneth J.
; APPLICANT: Kijavlin, Ivar J.
; APPLICANT: Kuo, Sophia S.
; APPLICANT: Napier, Mary A.
; APPLICANT: Pan, James
; APPLICANT: Paoni, Nicholas F.
; APPLICANT: Roy, Margaret Ann
; APPLICANT: Shelton, David L.
; APPLICANT: Stewart, Timothy A.
; APPLICANT: Tumas, Daniel
; APPLICANT: Williams, P. Mickey
; APPLICANT: Wood, William I.
; TITLE OF INVENTION: Secreted and Transmembrane Polypeptides and Nucleic
; FILE REFERENCE: P26301C99
; CURRENT APPLICATION NUMBER: US/10/013, 929A
; CURRENT FILING DATE: 2002-03-19
; PRIOR APPLICATION NUMBER: 09/918585
; PRIOR FILING DATE: 2001-07-30
; PRIOR APPLICATION NUMBER: 60/062250
; PRIOR FILING DATE: 1997-10-17
; PRIOR APPLICATION NUMBER: 60/064249
; PRIOR FILING DATE: 1997-11-03
; PRIOR APPLICATION NUMBER: 60/065311
; PRIOR FILING DATE: 1997-11-13
; PRIOR APPLICATION NUMBER: 60/066364
; PRIOR FILING DATE: 1997-11-21
; PRIOR APPLICATION NUMBER: 60/077450
; PRIOR FILING DATE: 1998-03-10
; PRIOR APPLICATION NUMBER: 60/077632
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; PRIOR APPLICATION NUMBER: 60/077791
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;; PRIOR FILING DATE: 1998-05-15
;; PRIOR APPLICATION NUMBER: 60/085580
;; PRIOR FILING DATE: 1998-05-15
;; PRIOR APPLICATION NUMBER: 60/085573
;; PRIOR FILING DATE: 1998-05-15
;; PRIOR APPLICATION NUMBER: 60/085704
;; PRIOR FILING DATE: 1998-05-15
;; PRIOR APPLICATION NUMBER: 60/085697

Query Match 20.2%; Score 470; DB 14; Length 802;
Best Local Similarity 33.1%; Pred. No. 2.5e-31;

Matches 124; Conservative 52; Mismatches 145; Indels 54; Gaps 18;
QY 58 PCAS-IICGHCIT---DGIQSFSCTCRSGMGRFCQREVSFLACSLDNGGCTATCEE 112
Db 448 PCGBEFLCSVGLCVACDGVK---DQNGLDERNVCORATF-QCKEDS---TGISLPK 499
QY 113 VCMRRCSCAPGYKLDGLDQCHPAVKFPCGRPMKREKRSHTL-----RDTE 160
Db 500 V---CDQDPLCLNGSDDEOCCEGV--PCGTFPQCE-DRSCVKRPPQCDGAPDCRDS 552
QY 161 DQE-----DQVPERLIDSKMTRRSGSPQVLLDSKKKACGAVLTHPSVLTAAACMD 214
Db 553 DEHDHDCGLQGPSSRLVGVANVSSEGEPMWQ-ASLQVRGHNLCGALTADRWVITAAHCQ 611
QY 215 ESKKLIVPAGSYDLR-WF--KW-ELDLIKVFVHPNYSKSTTDNDILHLAOPATL 269
Db 612 EDSMASVLTMTVFLGKWNQSRMGEVSFVKSRLHLHPHEDSHDVALDLDPVVR 671
QY 270 SQTIVICLPDSGLAREBLNQAQETLVTGWSYSSREKAKRRRTVLNFIKIPVPHN 329
Db 672 SANRPFCLP---ASHFFEPGLHCWITGMG--ALRBGEPISN---ALQKDVOLIPQD 722
QY 330 ECGEWSMNVSENNLCAGILSDRQACEGDSGSPMTA-SFHGTWFLVGLVSWGEGGGLH 388
Db 723 LCEBAVRQYVTPRMLCAGYRKKGKDKACGDSGGLVKCALSGRWFAGLVSWGLGCGRPN 782
QY 389 NYGVYTKVSRVLTWT 403
Db 783 YRGVYTRITGVISWT 797

RESULT 146
US-10-016-177A-169
; Sequence 169, Application US/10016177A
; Publication No. US20030073131A1
; GENERAL INFORMATION:
; APPLICANT: Ashkenazi, Avi
; APPLICANT: Baker Kevin P.
; APPLICANT: Botstein, David
; APPLICANT: Desnoyers, Luc
; APPLICANT: Eaton, Dan
; APPLICANT: Ferrara, Napoleon
; APPLICANT: Filvaroff, Ellen
; APPLICANT: Gong, Sherman
; APPLICANT: Gao, Wei-Oiang
; APPLICANT: Gerber, Hanspeter
; APPLICANT: Geritsen, Mary E.
; APPLICANT: Goddard, Audrey
; APPLICANT: Grimaldi, J. Christopher
; APPLICANT: Gurney, Austin L.
; APPLICANT: Hillan, Kenneth J.
; APPLICANT: Kijavitt, Ivar J.
; APPLICANT: Kuo, Sophia S.
; APPLICANT: Napier, Mary A.
; APPLICANT: Pan, James;
; APPLICANT: Paoni, Nicholas F.
; APPLICANT: Roy, Margaret Ann
; APPLICANT: Shelton, David L.
; APPLICANT: Stewart, Timothy A.
; APPLICANT: Tumas, Daniel
; APPLICANT: Williams, P. Mickey
; APPLICANT: Wood, William I.
; TITLE OF INVENTION: Secreted and Transmembrane Polypeptides and Nucleic
; FILE REFERENCE: P2630P1C90
; CURRENT APPLICATION NUMBER: US/10/016,177A
; CURRENT FILING DATE: 2002-04-30
; Prior application removed - See File Wrapper or Palm
; NUMBER OF SEQ ID NOS: 624
; SEQ ID NO 169
; LENGTH: 802
; TYPE: PRT

ORGANISM: Homo sapiens
US-10-016-177A-169

Query Match 20.2%; Score 470; DB 14; Length 802;
Best Local Similarity 33.1%; Pred. No. 2.5e-31;
Matches 124; Conservative 52; Mismatches 145; Indels 54; Gaps 18;

QY 58 PCAS--LCGNGTCT---DGISFSCDSCSGMEGRFCOREVFLNCSLDNGCTHYCEE 112
DB 448 PCGEFLCSVNGLCVPCAGSVK---DPCNDLERNVCRAFF-QCKEDS---TCLSLPK 499
QY 113 YGMRKSSCAPGKTLGDDLLQCPAYKPCGPKMKERKSHLK-----RDTE 160
DB 500 V---CDGQPDCLNGSDEECQEGV--PCGTFTEPCE--RSCVKKKPPQCDGRPCDSDS 552
QY 161 DOE-----DQVDRLDGMTRRGDSPPQVVLIDSKKTLAAGANTLHPMWTATACMD 214
DB 553 DEHCDGCLGQPPSRRTGAGVNSBEEMPMQ--ASLQVRGHTGGLADRWVTAHCCQ 611
QY 215 ESKRLVRLAGEYDLRR--WV--ELDLIKVFFVHPVNSKSTTNDIALHLAQPATL 269
DB 612 EDSMASTVLTWTFVLGKVMQNSRMPBEVSFXKSLRLHPHEEDSHDVALQLDHPVR 671
QY 270 SCITYPCLDPGSLAEPLNQAGETLVTCGHSSREKAKRNTFVNFITIPVPPN 329
DB 672 SAARVYCLP---ARSHFEPEGHCWITWG--ALREGPISN---ALQKVVQLIPQD 722
QY 330 ESEVSNMNSNNLCAGITGRODACEGDSGGPMVA--SFHGTFVLGVSWGEGGGLH 388
DB 723 LCEAARYVTFRMLCGYKSKKTRACGDSGGFLYCKRLSGRMTLADVLSWGLGGRPN 782
QY 389 NYGVYTKVSRYLDWI 403
DB 783 YFGVYRITGVYSWI 797

RESULT 147
US-10-166-709A-169
Sequence 169, Application US/10166709A
Publication No. US20030104536A1
GENERAL INFORMATION:
APPLICANT: Ashkenazi, Avi
APPLICANT: Baker Kevin F.
APPLICANT: Botstein, David
APPLICANT: Desnoyers, Luc
APPLICANT: Eaton, Dan
APPLICANT: Ferrara, Napoleon
APPLICANT: Filvaroff, Ellen
APPLICANT: Fong, Sherman
APPLICANT: Gao, Wei-Qiang
APPLICANT: Gerber, Hanspeter
APPLICANT: Gerltzen, Mary E.
APPLICANT: Goddard, Audrey
APPLICANT: Godowski, Paul J.
APPLICANT: Grimaldi, J. Christopher
APPLICANT: Guiney, Austin L.
APPLICANT: Hillan, Kenneth J.
APPLICANT: Kijavlin, Ivar J.
APPLICANT: Kuo, Sophia S.
APPLICANT: Napier, Mary A.
APPLICANT: Pan, James
APPLICANT: Paoni, Nicholas F.
APPLICANT: Roy, Margaret Ann
APPLICANT: Shelton, David L.
APPLICANT: Stewart, Timothy A.
APPLICANT: Thomas, Daniel
APPLICANT: Williams, P. Mickey
APPLICANT: Wood, William I.
TITLE OF INVENTION: Secreted and Transmembrane Polypeptides and Nucleic
FILE REFERENCE: P2630PIC59
CURRENT APPLICATION NUMBER: US/10/166,709A
CURRENT FILING DATE: 2001-10-19

PRIOR APPLICATION NUMBER: 09/918585
PRIOR FILING DATE: 2001-07-30
PRIOR APPLICATION NUMBER: 60/062250
PRIOR FILING DATE: 1997-10-17
PRIOR APPLICATION NUMBER: 60/064249
PRIOR FILING DATE: 1997-11-03
PRIOR APPLICATION NUMBER: 60/065311
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PRIOR FILING DATE: 1998-05-15
PRIOR APPLICATION NUMBER: 60/085704
PRIOR FILING DATE: 1998-05-15
PRIOR APPLICATION NUMBER: 60/085697

Query Match 20.2%; Score 470; DB 14; Length 802;

Best Local Similarity 33.1%; Pred No. 2.5e-31; Matches 124; Conservative 52; Mismatches 145; Indels 54; Gaps 18;

QY 58 PCAS--LCGGGTCT---DGISFSCDCRSGWGRFCQREVSFLNCSLNDGCTTYCLBE 112
DB 448 PCGEFLCSVNGLCVPCADGVK---DCPNGLDERNCVCRAF--QCKEDS---TCISLPK 499
QY 113 VGMRRGSCAPGKYGDDLLQCHPAVKPCORPKMKKEKRSLK-----RDTE 160
DB 500 V---CDQPDCLNGSSEBQCOEGV--PCGFTTFOE--DRSCVKEPNQDGRPCDRGS 552
QY 161 DDE-----DQVDPRLDGGKTRRGDSFQVYLLDSKKKLAAGVLIHPSWVLTAAHCD 214
DB 553 DEHDCCGCGPSSSRIVGAVSSSEGEWFQ--ASLOVRGHTCGALLADRWVLTAAHCFQ 611
QY 215 ESKKTLVRLGETDLRR--WE--ELDLIKVYVHNPVYSTDDNDIALHLAPRL 269
DB 612 EDNASTVLTWTFVFGKWCNRSRMPBEVSFKYSRLIHPHEEDSHDYVALLDHPVVR 671
QY 270 SOTTIVICPDGSLAEELNOAGQETLVTWGYNHSSREKARNTFTVFIKIPVPPN 329
DB 672 SAANRPVCLP---ARSHFFEPOLHCWITWG--ALRBGPISN---ALQKDVQILPDD 722
QY 330 ECEVSNMNVSEMLCAGILADRODACGDSGGPMVA--SFHGTWELVGLVSWGSGGILL 388
DB 723 LCEAVRYQVTPRLCAGYRKXKXDAQCGDSGGPLVCKALSGRWFAGLVSMGLGGRPN 782
QY 389 NYGYTKSRYLDTWI 403
DB 783 YPGVYTRITGVYISWI 797
RESULT 148
US-10-143-031A-169
Sequence 169, Application US/10143031A
Publication No. US20030138439A1
GENERAL INFORMATION:
APPLICANT: Ashkenazi, Avi
APPLICANT: Baker Kevin P.
APPLICANT: Botstein, David
APPLICANT: Desnoyers, Luc
APPLICANT: Baton, Dan
APPLICANT: Ferrara, Napoleon
APPLICANT: Filvaroff, Ellen
APPLICANT: Fong, Sherman
APPLICANT: Gao, Wei-Qiang
APPLICANT: Gerber, Hanspeter
APPLICANT: Gettisen, Mary E.
APPLICANT: Goddard, Audrey
APPLICANT: Godowski, Paul J.
APPLICANT: Grimaldi, J. Christopher
APPLICANT: Gunney, Austin L.

APPLICANT: Allan, Kenneth J
APPLICANT: Kijaviri, Ivar J.
APPLICANT: Kuo, Sophia S.
APPLICANT: Napier, Mary A.
APPLICANT: Pan, James
APPLICANT: Peoni, Nicholas F.
APPLICANT: Roy, Margaret Ann
APPLICANT: Shelton, David L.
APPLICANT: Stewart, Timothy A.
APPLICANT: Thomas, Daniel
APPLICANT: Williams, P. Mickey
APPLICANT: Wood, William I.
TITLE OF INVENTION: Secreted and Transmembrane Polypeptides and Nucleic
FILE REFERENCE: P2630PIC39
CURRENT APPLICATION NUMBER: US/10/143,031A
CURRENT FILING DATE: 2002-10-10
PRIOR APPLICATION NUMBER: 09/918585
PRIOR FILING DATE: 2001-07-30
PRIOR APPLICATION NUMBER: 60/062250
PRIOR FILING DATE: 1997-10-17
PRIOR APPLICATION NUMBER: 60/064249
PRIOR FILING DATE: 1997-11-03
PRIOR APPLICATION NUMBER: 60/065311
PRIOR FILING DATE: 1997-11-13
PRIOR APPLICATION NUMBER: 60/066364
PRIOR FILING DATE: 1997-11-21
PRIOR APPLICATION NUMBER: 60/07450
PRIOR FILING DATE: 1998-03-10
PRIOR APPLICATION NUMBER: 60/07632
PRIOR FILING DATE: 1998-03-11
PRIOR APPLICATION NUMBER: 60/07641
PRIOR FILING DATE: 1998-03-11
PRIOR APPLICATION NUMBER: 60/07649
PRIOR FILING DATE: 1998-03-11
PRIOR APPLICATION NUMBER: 60/07791
PRIOR FILING DATE: 1998-03-12
Remaining Prior Application data removed - See File Wrapper or PALM.
NUMBER OF SEQ ID NOS: 624
SEQ ID NO 169
LENGTH: 802
TYPE: PRT
ORGANISM: Homo sapiens
US-10-143-031A-169

Query Match 20.2%; Score 470; DB 14; Length 802;
Best Local Similarity 33.1%; Pred. No. 2.5e-31;
Matches 124; Conservative 52; Mismatches 145; Indels 54; Gaps 18;

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448 PCGEPLCSVNLCPACDGVK---DCPNGLDERNCVCRAITF-QCKEDS---TCTSLPK 499
113 VGNRRSCAPGKXIGDLDLQCHPAKFKCGPKMKMEKRSKLT-----RDTE 160
500 V---CDQPPCLNLSDEECQEGV--FCGFTFQCB-DRSCVKPENPOCDGRPDRCDS 552
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553 DEHDCDCGLGPPSSRIYGAIVSSEGEWPMQ-ASIQRGHITGGLTADRWVITAAHCQ 611
215 ESKKLIVRLGEYLR-WE--KW--ELDLDIKEYFVHPVYSKSTTDNDIALHLAOPATL 269
612 EDSMASTVLTWTVFLGKWCNSRPGSVFYSRLILHPYHERSDHYVALLLQDHPVVR 671
270 SQTIVPDLCPDGSGLAEELNQAQGETLVTGCHHSREKARNTFTVNFILIPVPPIN 329
672 SAARFVCLP---ARSHFPEPLHCWITWG--ALREGGPTSN---ALQKVVDLIPED 722
330 ECSEVSNVNSVSNMLCAGILSDRODACEGDSGGPMVA-SFHQTFVLGLVSNCGCGGLIH 388
723 LCEAVRYQVTPRMILCAGYRKGRKDAQCGDSGGFLVCKXLSGRWLTAGVSNGLGCGGRN 782

389 NGVYTKVSRVLDWI 403
783 YFGVYTRINGVYSMT 797

US-10-143-030A-169
Sequence 169, Application US/10143030A
Publication No. US20030147901A1
GENERAL INFORMATION:
APPLICANT: Askenazi, Avi
APPLICANT: Baker Kevin P.
APPLICANT: Bostein, David
APPLICANT: Destoyers, Luc
APPLICANT: Eaton, Dan
APPLICANT: Ferrara, Napoleon
APPLICANT: Filvaroff, Ellen
APPLICANT: Fong, Sherman
APPLICANT: Gao, Wei-Qiang
APPLICANT: Gerltsen, Hanspeter
APPLICANT: Gertsen, Mary E.
APPLICANT: Goddard, Audrey
APPLICANT: Godowski, Paul J.
APPLICANT: Grimaldi, J. Christopher
APPLICANT: Gunney, Austin L.
APPLICANT: Hillan, Kenneth J.
APPLICANT: Kijaviri, Ivar J.
APPLICANT: Kuo, Sophia S.
APPLICANT: Napier, Mary A.
APPLICANT: Pan, James
APPLICANT: Peoni, Nicholas F.
APPLICANT: Roy, Margaret Ann
APPLICANT: Shelton, David L.
APPLICANT: Stewart, Timothy A.
APPLICANT: Thomas, Daniel
APPLICANT: Williams, P. Mickey
APPLICANT: Wood, William I.
TITLE OF INVENTION: Secreted and Transmembrane Polypeptides and Nucleic
FILE REFERENCE: P2630PIC39
CURRENT APPLICATION NUMBER: US/10/143,030A
CURRENT FILING DATE: 2002-08-27
PRIOR APPLICATION NUMBER: 09/918585
PRIOR FILING DATE: 2001-07-30
PRIOR APPLICATION NUMBER: 60/062250
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PRIOR FILING DATE: 1998-03-11
PRIOR APPLICATION NUMBER: 60/07649
PRIOR FILING DATE: 1998-03-11
PRIOR APPLICATION NUMBER: 60/07791
PRIOR FILING DATE: 1998-03-12
Remaining Prior Application data removed - See File Wrapper or PALM.
NUMBER OF SEQ ID NOS: 624
SEQ ID NO 169
LENGTH: 802
TYPE: PRT
ORGANISM: Homo sapiens
US-10-143-030A-169
Query Match 20.2%; Score 470; DB 14; Length 802;
Best Local Similarity 33.1%; Pred. No. 2.5e-31;
Matches 124; Conservative 52; Mismatches 145; Indels 54; Gaps 18;

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QY 113 VGMRCSCAGYKLGDDLLQCHPVKPCGGRWMEKGRSHIK-----RDTE 160
D 500 V----CGQPCDCLNGSDEROCQEGV--PCGTFTQCE--DRSCVKKNPQCDRPRCDGS 552
QY 161 DE-----DQVDPRLIDGKTRRGSDSPNOVYLLDSKKKLACANVLHHSWLTAAICMD 214
D 553 DEHDCGLGCGSSRIVGAVSSGCEPWO--ASLOVRGRHICGALLADRWYTTAAICFO 611
QY 215 ESKLLVLGEVDLR--WE--KW--ELDDIKEVPHNSKSTTNDIALIHAOPAIL 269
D 612 EDMSASTVLTWTFVIGKWNQSRMPGEVSFVYSKLLHPIHEDSHDYVALLODHPVVR 671
QY 270 SQTIVPICLPSGLERELNQAQETLVGNGYHSRKEKKNRFFVNFKTPVPEH 329
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QY 330 ECSEVMSNMYSENMLCAGILGRODACGSDSGGPNVA--SPHGMPVLGVLVSGSGGLH 388
D 723 LCSARVYQVTPMLCAGYRKQKDAQCGDSGGLVCAKLSGNFLAGLVNGLGCRPN 762
QY 389 NYGYTVVSRYDWM 403
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/ Sequence 169, Application US/10002967A
/ Publication No. US20030148373A1
/ GENERAL INFORMATION:
/ APPLICANT: Aekhenazi, Avi
/ APPLICANT: Baker Kevin P.
/ APPLICANT: Botstein, David
/ APPLICANT: Desnoyers, Iac
/ APPLICANT: Eaton, Dan
/ APPLICANT: Ferrara, Napoleon
/ APPLICANT: Filvaroff, Ellen
/ APPLICANT: Fong, Sherman
/ APPLICANT: Gao, Wei-Qiang
/ APPLICANT: Geisler, Hanspeter
/ APPLICANT: Gerltsen, Mary E.
/ APPLICANT: Goddard, Audrey
/ APPLICANT: Godowski, Paul J.
/ APPLICANT: Grimaldi, J. Christopher
/ APPLICANT: Gurney, Austin L.
/ APPLICANT: Hillan, Kenneth J.
/ APPLICANT: Kilgavin, Ivar J.
/ APPLICANT: Kuo, Sophia S.
/ APPLICANT: Napier, Mary A.
/ APPLICANT: Pan, James
/ APPLICANT: Paoni, Nicholas F.
/ APPLICANT: Roy, Margaret Ann
/ APPLICANT: Shelton, David L.
/ APPLICANT: Stewart, Timothy A.
/ APPLICANT: Tumas, Daniel
/ APPLICANT: Williams, P. Mickey
/ APPLICANT: Wood, William I.
/ TITLE OF INVENTION: Secreted and Transmembrane Polypeptides and Nucleic
/ FILE REFERENCE: P2630P1C72
/ CURRENT APPLICATION NUMBER: US/10/002, 967A
/ PRIOR FILING DATE: 2001-10-24
/ PRIOR APPLICATION NUMBER: 09/918585
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 ? PRIOR APPLICATION NUMBER: 60/085704
 ? PRIOR FILING DATE: 1998-05-15
 ? PRIOR APPLICATION NUMBER: 60/085697

Query Match 20.2%; Score 470; DB 14; Length 802;
 Best Local Similarity 33.1%; Pred. No. 2.5e-31;
 Matches 124; Conservative 52; Mismatches 145; Indels 54; Gaps 18;

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 Db PCEGEFLCVNGLCVPCDDVK---DCPNGLDERNCVCRAFP-QCKBDS---TCLSLPK 499
 QY VGNRRCSAPGYKLGDDLLQCHPAVFPCGRPWRRKREKRSHLK-----RDTE 160
 Db V---CDGQPDCLANGSDEBQCGGV--PCGTFPTQCE-DSCVKKPVPQCGRDCDGS 552
 QY 161 DGE-----DQDPELLIDGKMTREDSPOVVLDSKKKLAGAVLIHPSVTLPAHCHMD 214
 Db DEBHCDOGLQGPSSRIVGAVSSBSEWPMQ--ASLQVRGRHICGALLIDRWVITPAHCHQ 611
 QY ESKKLVRLGEVDLRR--WE--ELDLIDKEVFPVNPVNSXTDNDIALHLHAOPATL 269
 Db EDSASTVLTMTYFLKQWNSRNPGEVSVSKSLILHPHEBSSHVDYVALQJDHYRA 671
 QY 270 SQTIVPICLPDGLAERELNQAQETLVYWGYNHSSBEKAKNRTPYINFIKIPVVPEN 329
 Db 672 SAAVRPVCPLP---ARSHFPEPLGHOWITWG--ALREBGPISN---ALQVYDOLIPQD 722
 QY 330 ECGSWNNVNSNMTLCAILLGDQDACEGSGGPMVA-SHGFWLVGLVNGWAGCGGLAH 388
 Db 723 LGSBAFYQVTPRMLCAGYRKGRKQDCCQDSGGLVCKALSGWPLAGLWSGLGCGRRN 782
 QY 389 NYGVYTKVSRYLDMT 403
 Db 783 YFGVYTRIRIGVTSWT 797

Search completed: June 14, 2004, 17:50:01
 Job time : 61 secs

GenCore version 5.1.6
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OM protein - protein search, using sw model

Run on: June 14, 2004, 17:45:08 ; Search time 23 Seconds

(without alignments)
940.491 Million cell updates/sec

Title: US-09-997-623-4

Perfect score: 2324

Sequence: 1 ANSFLERHSSLERECIE.....LWINGHTRDKAPQKSNAP 419

Scoring table: BLOSUM62

Gapop 10.0 , Gapext 0.5

Searched: 389414 seqs, 51625971 residues

Total number of hits satisfying chosen parameters: 389414

Minimum DB seq length: 0
Maximum DB seq length: 200000000

Post-Processing: Minimum Match 0%

Maximum Match 100%

Database :

Issued Patents AA:*
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Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

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2	2324	100.0	419	2	US-08-955-471-1
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4	2324	100.0	419	4	US-10-182-263-1
5	2324	100.0	419	5	PCT-US92-10242-1
6	2324	100.0	461	4	US-10-182-263-2
7	2324	100.0	461	6	522537-2
8	2318	99.7	461	6	5460953-3
9	2317	99.7	460	2	US-08-756-506-2
10	2317	99.7	460	2	US-08-756-506-4
11	2296	98.8	419	4	US-10-182-263-5
12	2292	98.6	461	6	5270178-17
13	2292	98.6	461	6	5270178-18
14	2290	98.5	419	4	US-10-182-263-3
15	2288	98.5	419	4	US-10-182-263-6
16	2286.5	98.4	460	6	5270178-13
17	2286.5	98.4	460	6	5270178-14
18	2286	98.4	419	4	US-10-182-263-4
19	2281	98.1	410	3	US-09-065-872-1
20	2281	98.1	410	4	US-09-667-570A-1
21	2273.5	98.1	461	6	5270178-2
22	2273	97.8	409	3	US-09-065-872-2
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24	2271.5	97.7	460	6	5270178-15
25	2244.5	96.6	460	6	5270178-16
26	1419	61.1	252	1	US-07-720-189-1
27	1393.5	60.0	261	6	5270178-19

28	1384.5	59.6	261	6	5270178-20	Patent No. 5270178
29	1354	58.3	250	3	US-08-944-483-51	Sequence 51, Appl
30	1346.5	57.9	261	6	5270178-21	Patent No. 5270178
31	1328.5	57.2	261	6	5270178-5	Patent No. 5270178
32	809.5	34.8	487	1	US-08-469-486-53	Sequence 53, Appl
33	809.5	34.8	487	1	US-08-469-658-53	Sequence 53, Appl
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37	807	34.7	448	1	US-08-295-411-3	Sequence 3, Appl
38	807	34.7	448	1	US-08-955-471-3	Sequence 3, Appl
39	807	34.7	448	5	PCT-US92-10242-3	Sequence 3, Appl
40	803	34.6	488	4	US-09-367-777-44	Sequence 44, Appl
41	803	34.6	488	4	US-09-367-791A-27	Sequence 27, Appl
42	783	33.7	406	1	US-08-955-471-5	Sequence 5, Appl
43	783	33.7	406	2	PCT-US92-10242-5	Sequence 5, Appl
44	783	33.7	406	5	US-08-475-845-2	Sequence 2, Appl
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46	783	33.7	444	2	US-08-327-690-2	Sequence 2, Appl
47	783	33.7	444	2	US-08-660-289-2	Sequence 2, Appl
48	783	33.7	444	2	US-08-537-807-2	Sequence 2, Appl
49	783	33.7	444	2	US-08-871-003-2	Sequence 2, Appl
50	783	33.7	444	3	US-08-464-233-2	Sequence 2, Appl
51	783	33.7	444	3	US-09-189-607-2	Sequence 2, Appl
52	783	33.7	444	3	US-09-378-907-2	Sequence 2, Appl
53	783	33.7	444	5	PCT-US94-05779-2	Sequence 2, Appl
54	783	33.7	466	1	US-07-882-202A-4	Sequence 4, Appl
55	783	33.7	466	1	US-08-021-615A-4	Sequence 4, Appl
56	783	33.7	466	1	US-08-321-777-4	Sequence 4, Appl
57	783	33.7	466	3	US-09-009-217-14	Sequence 14, Appl
58	783	33.7	466	5	US-09-009-656-14	Sequence 14, Appl
59	783	33.7	466	5	PCT-US93-04493-4	Sequence 4, Appl
60	749.5	32.3	437	1	US-08-487-037-2	Sequence 2, Appl
61	746	32.1	488	1	US-08-487-037-1	Sequence 1, Appl
62	742	31.9	415	1	US-08-073-531B-1	Sequence 1, Appl
63	742	31.9	415	2	US-08-766-288-1	Sequence 1, Appl
64	741.5	31.9	437	1	US-08-487-037-3	Sequence 3, Appl
65	736.5	31.7	461	6	5521070-2	Patent No. 5521070
66	736	31.7	461	3	US-08-742-877-2	Sequence 2, Appl
67	736	31.7	461	4	US-09-053-871A-21	Sequence 21, Appl
68	736	31.7	461	4	US-10-133-907-5	Sequence 5, Appl
69	735	31.6	415	4	US-09-118-748-2	Sequence 2, Appl
70	731	31.5	415	1	US-08-295-411-2	Sequence 2, Appl
71	731	31.5	415	2	US-08-955-471-2	Sequence 2, Appl
72	731	31.5	415	5	PCT-US92-10242-2	Sequence 2, Appl
73	708	30.5	406	1	US-08-293-978-24	Sequence 24, Appl
74	563.5	24.2	622	3	US-08-952-967-8	Sequence 8, Appl
75	562.5	24.2	579	1	US-08-295-411-4	Sequence 4, Appl
76	562.5	24.2	579	3	US-08-955-471-4	Sequence 4, Appl
77	562.5	24.2	579	3	US-09-117-708-14	Sequence 14, Appl
78	562.5	24.2	579	5	PCT-US92-10242-4	Sequence 4, Appl
79	562.5	24.2	615	1	US-07-998-972A-3	Sequence 3, Appl
80	562.5	24.2	615	1	US-08-463-953-3	Sequence 3, Appl
81	562.5	24.2	615	1	US-08-462-261-3	Sequence 3, Appl
82	562.5	24.2	615	5	PCT-US92-11357-3	Sequence 3, Appl
83	473.5	20.5	295	3	US-08-338-368-2	Sequence 2, Appl
84	473.5	20.5	295	3	US-09-027-337-7	Sequence 7, Appl
85	473.5	20.4	255	4	US-09-654-600A-7	Sequence 7, Appl
86	473.5	20.4	255	4	US-08-148-910-12	Sequence 12, Appl
87	473.5	20.4	655	1	US-08-448-937A-12	Sequence 12, Appl
88	469	20.2	306	1	US-08-330-978-1	Sequence 1, Appl
89	469	20.2	306	1	US-08-474-042-1	Sequence 1, Appl
90	469	20.2	306	1	US-08-484-558-1	Sequence 1, Appl
91	469	20.2	306	1	US-08-774-592-1	Sequence 50, Appl
92	469	20.2	254	3	US-08-944-483-50	Sequence 3, Appl
93	468.5	20.2	254	3	US-08-330-978-3	Sequence 3, Appl
94	463.5	19.9	254	1	US-08-474-042-3	Sequence 3, Appl
95	463.5	19.9	254	1	US-08-484-558-3	Sequence 3, Appl
96	463.5	19.9	254	1	US-08-774-592-3	Sequence 3, Appl
97	463.5	19.9	254	1	US-08-330-978-4	Sequence 4, Appl
98	456	19.6	241	1	US-08-474-042-4	Sequence 4, Appl
99	456	19.6	241	1	US-08-484-558-4	Sequence 4, Appl
100	456	19.6	241	1	US-08-484-558-4	Sequence 4, Appl

101 456 19.6 241 1 US-08-774-592-4 Sequence 4, Appl
102 448 19.3 376 2 US-08-558-269-10 Sequence 10, Appl
103 448 19.3 376 3 US-09-410-882-10 Sequence 10, Appl
104 444 19.1 259 3 US-08-944-483-52 Sequence 52, Appl
105 441 19.0 247 3 US-08-944-483-45 Sequence 45, Appl
106 437 18.8 300 1 US-08-148-910-1 Sequence 1, Appl
107 437 18.8 300 1 US-08-448-937A-1 Sequence 1, Appl
108 435 18.7 400 3 US-09-004-731-30 Sequence 30, Appl
109 435 18.7 400 3 US-09-004-731-33 Sequence 33, Appl
110 435 18.7 400 3 US-08-749-699-30 Sequence 30, Appl
111 435 18.7 400 3 US-08-749-699-33 Sequence 33, Appl
112 435 18.7 400 4 US-09-004-729-30 Sequence 30, Appl
113 435 18.7 400 4 US-09-004-729-33 Sequence 33, Appl
114 432 18.6 387 3 US-09-032-215-8 Sequence 8, Appl
115 432 18.6 387 3 US-09-032-215-13 Sequence 13, Appl
116 429 18.5 235 3 US-08-944-483-48 Sequence 48, Appl
117 428.5 18.4 242 3 US-09-004-731-36 Sequence 36, Appl
118 428.5 18.4 242 3 US-08-749-699-36 Sequence 36, Appl
119 428.5 18.4 242 3 US-09-004-729-36 Sequence 36, Appl
120 421 18.1 814 1 US-08-944-483-63 Sequence 63, Appl
121 417.5 18.0 248 3 US-08-681-151-3 Sequence 3, Appl
122 414 17.8 638 2 US-08-248-629A-1 Sequence 1, Appl
123 412 17.7 812 1 US-08-451-932-1 Sequence 1, Appl
124 412 17.7 812 1 US-08-452-260-1 Sequence 1, Appl
125 412 17.7 812 1 US-08-326-785-1 Sequence 1, Appl
126 412 17.7 812 2 US-08-612-788-1 Sequence 1, Appl
127 412 17.7 812 2 US-08-605-598B-1 Sequence 1, Appl
128 412 17.7 812 2 US-08-429-743-1 Sequence 1, Appl
129 412 17.7 812 2 US-08-866-735-1 Sequence 1, Appl
130 412 17.7 812 2 US-09-066-028-1 Sequence 1, Appl
131 412 17.7 812 4 US-09-192-012-3 Sequence 3, Appl
132 412 17.7 812 4 US-09-335-325-1 Sequence 12, Appl
133 412 17.7 812 4 US-08-991-761A-12 Sequence 1, Appl
134 412 17.7 812 5 US-09-079-970A-5 Sequence 5, Appl
135 410.5 17.7 249 3 US-08-469-486-54 Sequence 54, Appl
136 410 17.6 790 2 US-08-469-658-54 Sequence 54, Appl
137 410 17.6 791 2 US-09-131-995-1 Sequence 1, Appl
138 410 17.6 791 2 US-08-832-087B-1 Sequence 1, Appl
139 410 17.6 791 3 US-09-132-154-1 Sequence 1, Appl
140 410 17.6 791 3 US-07-854-603-2 Sequence 2, Appl
141 410 17.6 810 1 US-08-147-000B-29 Sequence 29, Appl
142 410 17.6 810 3 US-09-086-514-1 Sequence 1, Appl
143 410 17.6 810 4 US-09-192-012-5 Sequence 5, Appl
144 410 17.6 810 6 5200340-8 Patent No. 5200340
145 409.5 17.6 267 2 US-09-016-366A-23 Sequence 23, Appl
146 409.5 17.6 267 2 US-08-978-404B-18 Sequence 18, Appl
150 409.5 17.6 267 2

ALIGNMENTS

RESULT 1
US-08-295-411-1
Sequence 1, Application US/08295411
Patent No. 5679639
GENERAL INFORMATION:
APPLICANT: Griffin, John H.
APPLICANT: Meesters, Rolf M.
TITLE OF INVENTION: Serine Protease-Derived Polypeptides and
Anti-Peptide Antibodies, Systems and Therapeutic Methods
TITLE OF INVENTION: for Inhibiting Coagulation
NUMBER OF SEQUENCES: 10
CORRESPONDENCE ADDRESS:
ADDRESS: Office of Patent Counsel, The Scripps
ADDRESS: Research Institute
STREET: 10666 No. 5679639th Torrey Pines Road, TPC 8
CITY: La Jolla
STATE: CA
COUNTRY: USA

ZIP: 92037
COMPUTER READABLE FORM:
MEDIUM TYPE: floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patent Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/295, 411
FILING DATE: 22-AUG-1994
CLASSIFICATION: 530
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 07/793, 989
FILING DATE: 18-NOV-1991
CLASSIFICATION: 530
ATTORNEY/AGENT INFORMATION:
NAME: Fitting, Thomas
REGISTRATION NUMBER: 34,163
REFERENCE/DOCKET NUMBER: TSI1263.0C1
TELECOMMUNICATION INFORMATION:
TELEPHONE: 619-554-2937
TELEFAX: 619-554-6312
INFORMATION FOR SEQ ID NO: 1:
SEQUENCE CHARACTERISTICS:
LENGTH: 419 amino acids
TYPE: amino acid
TOPOLOGY: linear
MOLECULE TYPE: protein
HYPOTHEICAL: NO
ANTI-SENSE: NO
FEATURE:
NAME/KEY: Region
LOCATION: 1..157
OTHER INFORMATION: /note= "Protein C Light Chain"
FEATURE:
NAME/KEY: Region
LOCATION: 158..169
OTHER INFORMATION: /note= "Protein C Activation"
OTHER INFORMATION: Peptide"
NAME/KEY: Region
LOCATION: 170..419
OTHER INFORMATION: /note= "Protein C Heavy Chain"
US-08-295-411-1
Query Match 100.0%; Score 2324; DB 1; Length 419;
Best Local Similarity 100.0%; Pred. No. 8.7e-191;
Matches 419; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
QY 1 ANSFLEPHSRSTRECEIEICDFEAKETIFONVDDTLAFMSKVDGDCVLPLEHPCA 60
DB 1 ANSFLEPHSRSTRECEIEICDFEAKETIFONVDDTLAFMSKVDGDCVLPLEHPCA 60
QY 61 SLCCGHTCTIDIGSFSCDCRSGBGRFCOREVSLNCSLDNGGCTHYCLEEYGMRRSC 120
DB 61 SLCCGHTCTIDIGSFSCDCRSGBGRFCOREVSLNCSLDNGGCTHYCLEEYGMRRSC 120
QY 121 APGYKGLDILQCHPAVYPCGCPKRMKEKRSILKQTHEDDQVDRLLDGMTRRD 180
DB 121 APGYKGLDILQCHPAVYPCGCPKRMKEKRSILKQTHEDDQVDRLLDGMTRRD 180
QY 181 SPWQVVLDSKKKLAGAVLIHPSWVLTAAHOMDESKLLVRLGDIYDRWEKMLDLDI 240
DB 181 SPWQVVLDSKKKLAGAVLIHPSWVLTAAHOMDESKLLVRLGDIYDRWEKMLDLDI 240
QY 241 KEVAVHPNYSKSTTDNDIALHLAQPATLSQTIYVICLPDSGLAERLNQAGETLVYTW 300
DB 241 KEVAVHPNYSKSTTDNDIALHLAQPATLSQTIYVICLPDSGLAERLNQAGETLVYTW 300
QY 301 GHSSRREKAKNRFTVTNFKTPVPHNECSFYMSNWSNNLCAGLIGRQDACGSDS 360
DB 301 GHSSRREKAKNRFTVTNFKTPVPHNECSFYMSNWSNNLCAGLIGRQDACGSDS 360
QY 361 GGPVVASFHGTWFLVGLVSWGEGCGLLNHYGVYTKVRSYIDWIHGIHROKAPDOKSWAP 419

QY 301 GYHSREKAKRNTFTLVNFIKIPVPHNECESEWNSMSENMLCAGILGDRDACEGDS 360
DB 301 GYHSREKAKRNTFTLVNFIKIPVPHNECESEWNSMSENMLCAGILGDRDACEGDS 360
QY 361 GGPVVASFHGTWFLVGLVSWGEGCGLLHNYGVYTKVSRYLDMHIGHIRDKAPQSMAP 419
DB 361 GGPVVASFHGTWFLVGLVSWGEGCGLLHNYGVYTKVSRYLDMHIGHIRDKAPQSMAP 419

RESULT 4

US-10-182-263-1
Sequence 1, Application US/10182263
Patent No. 6630138
GENERAL INFORMATION:
APPLICANT: Gerltz, Bruce E
APPLICANT: Jones, Bryan E
APPLICANT: Grinnell, Brian W
TITLE OF INVENTION: PROTEIN C DERIVATIVES
FILE REFERENCE: X-13611
CURRENT APPLICATION NUMBER: US/10/182,263
CURRENT FILING DATE: 2002-07-22
PRIOR APPLICATION NUMBER: 60/181948
PRIOR FILING DATE: 2002-02-11
PRIOR APPLICATION NUMBER: 60/189199
PRIOR FILING DATE: 2000-03-14
NUMBER OF SEQ ID NOS: 12
SOFTWARE: PatentIn version 3.1
SEQ ID NO 1
LENGTH: 419
TYPE: PRT
ORGANISM: Homo sapiens
US-10-182-263-1

Query Match 100.0%; Score 2324; DB 4; Length 419;
Best Local Similarity 100.0%; Pred. No. 8.7e-191;
Matches 419; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 ANSFLELRHSSLRECEIEICDPEAKETIPONVDTLAFMSKVHVDGQCLVPLEHPCA 60
DB 1 ANSFLELRHSSLRECEIEICDPEAKETIPONVDTLAFMSKVHVDGQCLVPLEHPCA 60
QY 61 SLCCGHTCIGISFSFCDSGSGMEGRFCQREVSFLNCSLNDGCTHYCLEEVGRRCSC 120
DB 61 SLCCGHTCIGISFSFCDSGSGMEGRFCQREVSFLNCSLNDGCTHYCLEEVGRRCSC 120
QY 121 APGYKLGDDLLQCHPAVFPQGRPMKMKRSHLRDTEDEDDVDPRLIDGKMTREGD 180
DB 121 APGYKLGDDLLQCHPAVFPQGRPMKMKRSHLRDTEDEDDVDPRLIDGKMTREGD 180
QY 181 SPQVVLDSKKKLCAGAVLIHPSWVLTAAHCDSESKLLVRLGEYDLRREKWEILDLDI 240
DB 181 SPQVVLDSKKKLCAGAVLIHPSWVLTAAHCDSESKLLVRLGEYDLRREKWEILDLDI 240
QY 241 KEVFEHNTSYSTDDNDIALHLAQPATLSQTVIPLCLPSGAARELNAGGETLVYTCW 300
DB 241 KEVFEHNTSYSTDDNDIALHLAQPATLSQTVIPLCLPSGAARELNAGGETLVYTCW 300
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DB 301 GYHSREKAKRNTFTLVNFIKIPVPHNECESEWNSMSENMLCAGILGDRDACEGDS 360
QY 361 GGPVVASFHGTWFLVGLVSWGEGCGLLHNYGVYTKVSRYLDMHIGHIRDKAPQSMAP 419
DB 361 GGPVVASFHGTWFLVGLVSWGEGCGLLHNYGVYTKVSRYLDMHIGHIRDKAPQSMAP 419

RESULT 5

PCT-US92-10242-1
Sequence 1, Application PC/TUS9210242
GENERAL INFORMATION:
APPLICANT: Griffin, John H.
APPLICANT: Meesters, Rolf
TITLE OF INVENTION: Serine Protease-Derived Polypeptides and

TITLE OF INVENTION: Anti-Peptide Antibodies, Systems and Therapeutic Methods
NUMBER OF SEQUENCES: 10
CORRESPONDENCE ADDRESS:
ADDRESSEE: Office of Patent Counsel, The Scripps
ADDRESSEE: Research Institute
STREET: 10666 North Torrey Pines Road, TPC 8
CITY: La Jolla
STATE: CA
COUNTRY: USA
ZIP: 92037
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: PCT/US92/10242
FILING DATE: 19921118
CLASSIFICATION:
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 07/793,989
FILING DATE: 18-NOV-1991
ATTORNEY/AGENT INFORMATION:
NAME: Fitting, Thomas
REGISTRATION NUMBER: 34,163
REFERENCE/DOCKET NUMBER: SCRO472P
TELECOMMUNICATION INFORMATION:
TELEPHONE: 619-554-2937
TELEFAX: 619-554-6312
INFORMATION FOR SEQ ID NO: 1:
SEQUENCE CHARACTERISTICS:
LENGTH: 419 amino acids
TYPE: AMINO ACID
TOPOLOGY: linear
MOLECULE TYPE: Protein
HYPOTHETICAL: NO
ANTI-SENSE: NO
FEATURE:
NAME/KEY: Region
LOCATION: 1..157
OTHER INFORMATION: /note= "Protein C Light Chain"

QY 1 ANSFLELRHSSLRECEIEICDPEAKETIPONVDTLAFMSKVHVDGQCLVPLEHPCA 60
DB 1 ANSFLELRHSSLRECEIEICDPEAKETIPONVDTLAFMSKVHVDGQCLVPLEHPCA 60
QY 61 SLCCGHTCIGISFSFCDSGSGMEGRFCQREVSFLNCSLNDGCTHYCLEEVGRRCSC 120
DB 61 SLCCGHTCIGISFSFCDSGSGMEGRFCQREVSFLNCSLNDGCTHYCLEEVGRRCSC 120
QY 121 APGYKLGDDLLQCHPAVFPQGRPMKMKRSHLRDTEDEDDVDPRLIDGKMTREGD 180
DB 121 APGYKLGDDLLQCHPAVFPQGRPMKMKRSHLRDTEDEDDVDPRLIDGKMTREGD 180
QY 181 SPQVVLDSKKKLCAGAVLIHPSWVLTAAHCDSESKLLVRLGEYDLRREKWEILDLDI 240
DB 181 SPQVVLDSKKKLCAGAVLIHPSWVLTAAHCDSESKLLVRLGEYDLRREKWEILDLDI 240

Query Match 100.0%; Score 2324; DB 5; Length 419;
Best Local Similarity 100.0%; Pred. No. 8.7e-191;
Matches 419; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 ANSFLELRHSSLRECEIEICDPEAKETIPONVDTLAFMSKVHVDGQCLVPLEHPCA 60
DB 1 ANSFLELRHSSLRECEIEICDPEAKETIPONVDTLAFMSKVHVDGQCLVPLEHPCA 60
QY 61 SLCCGHTCIGISFSFCDSGSGMEGRFCQREVSFLNCSLNDGCTHYCLEEVGRRCSC 120
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QY 181 SPQVVLDSKKKLCAGAVLIHPSWVLTAAHCDSESKLLVRLGEYDLRREKWEILDLDI 240
DB 181 SPQVVLDSKKKLCAGAVLIHPSWVLTAAHCDSESKLLVRLGEYDLRREKWEILDLDI 240

QY 241 KEVFNHNSKSTTNDIALHLAQPATLSQTTVPICLPDSGLAEELNOAGETLYTGM 300
DB 241 KEVFNHNSKSTTNDIALHLAQPATLSQTTVPICLPDSGLAEELNOAGETLYTGM 300
QY 301 GYHSSREKAKNRFTVNFILKIPVPHNECSEVMSNNSNNMLCAGILGRDQACGDS 360
DB 301 GYHSSREKAKNRFTVNFILKIPVPHNECSEVMSNNSNNMLCAGILGRDQACGDS 360
QY 361 GGPWVASFHGTWFLVGLVSWGEGGLHNYGYTVKSRXYLDWIGHIRDKAPQKSWAP 419
DB 361 GGPWVASFHGTWFLVGLVSWGEGGLHNYGYTVKSRXYLDWIGHIRDKAPQKSWAP 419

RESULT 6
US-10-182-263-2
; Sequence 2, Application US/10182263
; Patent No. 6630138
; GENERAL INFORMATION:
; APPLICANT: Gerlitz, Bruce E
; APPLICANT: Jones, Bryan E
; APPLICANT: Grinnell, Brian W
; TITLE OF INVENTION: PROTEIN C DERIVATIVES
; FILE REFERENCE: X-13611
; CURRENT APPLICATION NUMBER: US/10/182,263
; PRIOR FILING DATE: 2002-07-22
; PRIOR APPLICATION NUMBER: 60/181948
; PRIOR FILING DATE: 2002-02-11
; PRIOR APPLICATION NUMBER: 60/189199
; NUMBER OF SEQ ID NOS: 12
; SOFTWARE: PatentIn version 3.1
; SEQ ID NO 2
; LENGTH: 461
; TYPE: PRT
; ORGANISM: Homo sapiens
US-10-182-263-2

Query Match 100.0%; Score 2324; DB 4; Length 461;
Best Local Similarity 100.0%; Pred. No. 9,8e-191;
Matches 419; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 ANSFLEELRHSSLEERCIEICDPEAKETFQNVDDTLAFMSKRVDDQCLVPLEHPCA 60
DB 43 ANSFLEELRHSSLEERCIEICDPEAKETFQNVDDTLAFMSKRVDDQCLVPLEHPCA 102
QY 61 SLCCGHTCTIDIGSSCDGSGWEGRFQREVSFLNCSLDNGGCTHYCLEEVGRRCSC 120
DB 103 SLCCGHTCTIDIGSSCDGSGWEGRFQREVSFLNCSLDNGGCTHYCLEEVGRRCSC 162
QY 121 AFGYKLGDDLLQCHPAVKEPCGRPMKMEKSSHLKRDTEDEQDVPRLIDGKMTREGD 180
DB 163 AFGYKLGDDLLQCHPAVKEPCGRPMKMEKSSHLKRDTEDEQDVPRLIDGKMTREGD 222
QY 181 SPQVYVLLDSKKLAAGAVLHPSWVLTAAHCDMSKKLVRLGEYDLRMEKWEILDIT 240
DB 223 SPQVYVLLDSKKLAAGAVLHPSWVLTAAHCDMSKKLVRLGEYDLRMEKWEILDIT 282
QY 241 KEVFNHNSKSTTNDIALHLAQPATLSQTTVPICLPDSGLAEELNOAGETLYTGM 300
DB 283 KEVFNHNSKSTTNDIALHLAQPATLSQTTVPICLPDSGLAEELNOAGETLYTGM 342
QY 301 GYHSSREKAKNRFTVNFILKIPVPHNECSEVMSNNSNNMLCAGILGRDQACGDS 360
DB 343 GYHSSREKAKNRFTVNFILKIPVPHNECSEVMSNNSNNMLCAGILGRDQACGDS 402
QY 361 GGPWVASFHGTWFLVGLVSWGEGGLHNYGYTVKSRXYLDWIGHIRDKAPQKSWAP 419
DB 403 GGPWVASFHGTWFLVGLVSWGEGGLHNYGYTVKSRXYLDWIGHIRDKAPQKSWAP 461

RESULT 7
5225537-2
; Patent No. 5225537

; APPLICANT: FOSTER, DONALD
; TITLE OF INVENTION: METHODS FOR PRODUCING HYBRID
; PHOSPHOLIPID-BINDING PROTEINS
; NUMBER OF SEQUENCES: 14
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/07/459,082
; FILING DATE: 29-DEC-1989
; SEQ ID NO:2
; LENGTH: 461
5225537-2

Query Match 100.0%; Score 2324; DB 6; Length 461;
Best Local Similarity 100.0%; Pred. No. 9,8e-191;
Matches 419; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 ANSFLEELRHSSLEERCIEICDPEAKETFQNVDDTLAFMSKRVDDQCLVPLEHPCA 60
DB 43 ANSFLEELRHSSLEERCIEICDPEAKETFQNVDDTLAFMSKRVDDQCLVPLEHPCA 102
QY 61 SLCCGHTCTIDIGSSCDGSGWEGRFQREVSFLNCSLDNGGCTHYCLEEVGRRCSC 120
DB 103 SLCCGHTCTIDIGSSCDGSGWEGRFQREVSFLNCSLDNGGCTHYCLEEVGRRCSC 162
QY 121 AFGYKLGDDLLQCHPAVKEPCGRPMKMEKSSHLKRDTEDEQDVPRLIDGKMTREGD 180
DB 163 AFGYKLGDDLLQCHPAVKEPCGRPMKMEKSSHLKRDTEDEQDVPRLIDGKMTREGD 222
QY 181 SPQVYVLLDSKKLAAGAVLHPSWVLTAAHCDMSKKLVRLGEYDLRMEKWEILDIT 240
DB 223 SPQVYVLLDSKKLAAGAVLHPSWVLTAAHCDMSKKLVRLGEYDLRMEKWEILDIT 282
QY 241 KEVFNHNSKSTTNDIALHLAQPATLSQTTVPICLPDSGLAEELNOAGETLYTGM 300
DB 283 KEVFNHNSKSTTNDIALHLAQPATLSQTTVPICLPDSGLAEELNOAGETLYTGM 342
QY 301 GYHSSREKAKNRFTVNFILKIPVPHNECSEVMSNNSNNMLCAGILGRDQACGDS 360
DB 343 GYHSSREKAKNRFTVNFILKIPVPHNECSEVMSNNSNNMLCAGILGRDQACGDS 402
QY 361 GGPWVASFHGTWFLVGLVSWGEGGLHNYGYTVKSRXYLDWIGHIRDKAPQKSWAP 419
DB 403 GGPWVASFHGTWFLVGLVSWGEGGLHNYGYTVKSRXYLDWIGHIRDKAPQKSWAP 461

RESULT 8
5460953-3
; Patent No. 5460953
; APPLICANT: GERLITZ, BRUCE E, GRINNELL, BRIAN W.
; TITLE OF INVENTION: VECTORS AND COMPOUNDS FOR EXPRESSION OF
; GLYCOSYLATION MUTANTS OF HUMAN PROTEIN C
; NUMBER OF SEQUENCES: 3
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/93,217
; FILING DATE: 09-SEP-1993
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: 628,063
; FILING DATE: 21-DEC-1990
; APPLICATION NUMBER: 484,081
; FILING DATE: 23-FEB-1990
; SEQ ID NO:3
; LENGTH: 461
5460953-3

Query Match 99.7%; Score 2318; DB 6; Length 461;
Best Local Similarity 99.8%; Pred. No. 3,2e-190;
Matches 418; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

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DB 43 ANSFLEELRHSSLEERCIEICDPEAKETFQNVDDTLAFMSKRVDDQCLVPLEHPCA 102
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Db 103 SLCCGHTCIDIGSFSCDCRSGBGRFCQREVSFLNCSJDNMGCTHYCLEVGMRCSC 162
QY 121 APGYKIGDILQCHPAVKPCGRPMKMEKRSHTLKDTEDEDDVDPRLIDGKMTREGD 180
Db 163 APGYKIGDILQCHPAVKPCGRPMKMEKRSHTLKDTEDEDDVDPRLIDGKMTREGD 222
QY 181 SPWQVVLDSKKKACGAVLIHPSWLTAACMDPESKLLVRLAGEYDLRREKNEELDLDI 240
Db 223 SPWQVVLDSKKKACGAVLIHPSWLTAACMDPESKLLVRLAGEYDLRREKNEELDLDI 282
QY 241 KEVFEHPNYSKSTTNDIALHLAQPATLSQTIYVPICLPDSGLARELNQAGQETLVGM 300
Db 283 KEVFEHPNYSKSTTNDIALHLAQPATLSQTIYVPICLPDSGLARELNQAGQETLVGM 342
QY 301 GYHSSEKAKRNRTFVNLNFIKI PVYPNECESEVMSNMVSENNLCAGLIGRODACEGDS 360
Db 343 GYHSSEKAKRNRTFVNLNFIKI PVYPNECESEVMSNMVSENNLCAGLIGRODACEGDS 402
QY 361 GGPVVASFFGTWFLVGLVSWGEGCGILHNYGYTKVSRYLDMWIGHIDKEAPQKSWA 419
Db 403 GGPVVASFFGTWFLVGLVSWGEGCGILHNYGYTKVSRYLDMWIGHIDKEAPQKSWA 461

RESULT 9

US-08-756-506-2
Sequence 2, Application US/08756506

Patent No. 5905185

GENERAL INFORMATION:

APPLICANT: Garner, Ian

APPLICANT: Cottingham, Ian R.

APPLICANT: Temperley, Simon M.

APPLICANT: Foster, Donald C.

APPLICANT: Sprecher, Cindy A.

APPLICANT: Prunkard, Donna E.

TITLE OF INVENTION: PROTEIN C PRODUCTION IN TRANSGENIC

NUMBER OF SEQUENCES: 25

CORRESPONDENCE ADDRESS:

ADDRESSEE: Zymogenetics, Inc.

STREET: 1201 Eastlake Avenue East

CITY: Seattle

STATE: WA

COUNTRY: USA

ZIP: 98102

COMPUTER READABLE FORM:

MEDIUM TYPE: Floppy disk

COMPUTER: IBM PC compatible

OPERATING SYSTEM: PC-DOS/MS-DOS

SOFTWARE: Patent In Release #1.0, Version #1.25

CURRENT APPLICATION DATA:

APPLICATION NUMBER: US/08/756,506

FILING DATE:

CLASSIFICATION: 800

ATTORNEY/AGENT INFORMATION:

NAME: Sawislak, Deborah A.

REGISTRATION NUMBER: 37,438

REFERENCE/DOCKET NUMBER: 95-28

TELECOMMUNICATION INFORMATION:

TELEPHONE: 206-442-6672

TELEFAX: 206-442-6678

INFORMATION FOR SEQ ID NO: 2:

SEQUENCE CHARACTERISTICS:

LENGTH: 460 amino acids

TYPE: amino acid

TOPOLOGY: linear

MOLECULE TYPE: protein

US-08-756-506-2

Query Match 99.7%; Score 2317; DB 2; Length 460;
Best Local Similarity 100.0%; Pred. No. 3.9e-190;
Matches 418; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 ANSTFELHSSLECEIEICDFEAKETPQNDVDTLAFMSKRVSDQCLVPLFHPQA 60

Db 43 ANSTFELHSSLECEIEICDFEAKETPQNDVDTLAFMSKRVSDQCLVPLFHPQA 102
QY 61 SLCCGHTCIDIGSFSCDCRSGBGRFCQREVSFLNCSJDNMGCTHYCLEVGMRCSC 120
Db 103 SLCCGHTCIDIGSFSCDCRSGBGRFCQREVSFLNCSJDNMGCTHYCLEVGMRCSC 162
QY 121 APGYKIGDILQCHPAVKPCGRPMKMEKRSHTLKDTEDEDDVDPRLIDGKMTREGD 180
Db 163 APGYKIGDILQCHPAVKPCGRPMKMEKRSHTLKDTEDEDDVDPRLIDGKMTREGD 222
QY 181 SPWQVVLDSKKKACGAVLIHPSWLTAACMDPESKLLVRLAGEYDLRREKNEELDLDI 240
Db 223 SPWQVVLDSKKKACGAVLIHPSWLTAACMDPESKLLVRLAGEYDLRREKNEELDLDI 282
QY 241 KEVFEHPNYSKSTTNDIALHLAQPATLSQTIYVPICLPDSGLARELNQAGQETLVGM 300
Db 283 KEVFEHPNYSKSTTNDIALHLAQPATLSQTIYVPICLPDSGLARELNQAGQETLVGM 342
QY 301 GYHSSEKAKRNRTFVNLNFIKI PVYPNECESEVMSNMVSENNLCAGLIGRODACEGDS 360
Db 343 GYHSSEKAKRNRTFVNLNFIKI PVYPNECESEVMSNMVSENNLCAGLIGRODACEGDS 402
QY 361 GGPVVASFFGTWFLVGLVSWGEGCGILHNYGYTKVSRYLDMWIGHIDKEAPQKSWA 418
Db 403 GGPVVASFFGTWFLVGLVSWGEGCGILHNYGYTKVSRYLDMWIGHIDKEAPQKSWA 460

RESULT 10

US-08-756-506-4

Sequence 4, Application US/08756506

Patent No. 5905185

GENERAL INFORMATION:

APPLICANT: Garner, Ian

APPLICANT: Cottingham, Ian R.

APPLICANT: Temperley, Simon M.

APPLICANT: Foster, Donald C.

APPLICANT: Sprecher, Cindy A.

APPLICANT: Prunkard, Donna E.

TITLE OF INVENTION: PROTEIN C PRODUCTION IN TRANSGENIC

NUMBER OF SEQUENCES: 25

CORRESPONDENCE ADDRESS:

ADDRESSEE: Zymogenetics, Inc.

STREET: 1201 Eastlake Avenue East

CITY: Seattle

STATE: WA

COUNTRY: USA

ZIP: 98102

COMPUTER READABLE FORM:

MEDIUM TYPE: Floppy disk

COMPUTER: IBM PC compatible

OPERATING SYSTEM: PC-DOS/MS-DOS

SOFTWARE: Patent In Release #1.0, Version #1.25

CURRENT APPLICATION DATA:

APPLICATION NUMBER: US/08/756,506

FILING DATE:

CLASSIFICATION: 800

ATTORNEY/AGENT INFORMATION:

NAME: Sawislak, Deborah A.

REGISTRATION NUMBER: 37,438

REFERENCE/DOCKET NUMBER: 95-28

TELECOMMUNICATION INFORMATION:

TELEPHONE: 206-442-6672

TELEFAX: 206-442-6678

INFORMATION FOR SEQ ID NO: 4:

SEQUENCE CHARACTERISTICS:

LENGTH: 460 amino acids

TYPE: amino acid

TOPOLOGY: linear

MOLECULE TYPE: protein

US-08-756-506-4

Query Match 99.7%; Score 2317; DB 2; Length 460;
Best Local Similarity 100.0%; Pred. No. 3,9e-190;
Matches 418; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

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QY 1 ANSFLELRHSSLERECEIEICDFEAKELFQVVDVDTLAFMSKIVDQGLVPLEHPCA 60
DB ANSFLELRHSSLERECEIEICDFEAKELFQVVDVDTLAFMSKIVDQGLVPLEHPCA 102
QY 61 SLCCGHTCIDIGISFSCDCSGMGEKFCQREVSFLNCSLDNGGCTHYCLEEYGMRCSC 120
DB SLCCGHTCIDIGISFSCDCSGMGEKFCQREVSFLNCSLDNGGCTHYCLEEYGMRCSC 162
QY 121 APGYKLGDDLLQCHPAVAFPCGPRWMEKESHLKRDTEQEDQVDFPLIDGMTRRGD 180
DB APGYKLGDDLLQCHPAVAFPCGPRWMEKESHLKRDTEQEDQVDFPLIDGMTRRGD 222
QY 181 SPQVVLDSKKKLAAGAVLHPSWVLTAAHCDSEKSLIVRIGDYDLRMEKWEILDLDI 240
DB SPQVVLDSKKKLAAGAVLHPSWVLTAAHCDSEKSLIVRIGDYDLRMEKWEILDLDI 282
QY 241 KEVFHPNYSKSTTNDIALHLAOPATLSQTVPICLPDSGLAERELNQAQGETLVYGM 300
DB KEVFHPNYSKSTTNDIALHLAOPATLSQTVPICLPDSGLAERELNQAQGETLVYGM 342
QY 301 GYHSSREKAKNRRTFVNFITKIPVYPHNECEVSNMVSNNMLCAGILGRDQACGDS 360
DB GYHSSREKAKNRRTFVNFITKIPVYPHNECEVSNMVSNNMLCAGILGRDQACGDS 402
QY 361 GGPVVASFHGTWFLVGLVSWGEGGLAHNYGYTTKVSRYLDWIHGIIRDEKAPQSNAP 418
DB GGPVVASFHGTWFLVGLVSWGEGGLAHNYGYTTKVSRYLDWIHGIIRDEKAPQSNAP 460
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RESULT 11
US-10-182-263-5

; Sequence 5, Application US/10182263
; Patent No. 6630138
; GENERAL INFORMATION:
; APPLICANT: Gerlitz, Bruce E
; APPLICANT: Jones, Brian W
; APPLICANT: Grinnell, Brian W
; TITLE OF INVENTION: PROTEIN C DERIVATIVES
; FILE REFERENCE: X-13611
; CURRENT APPLICATION NUMBER: US/10/182,263
; CURRENT FILING DATE: 2002-07-22
; PRIOR APPLICATION NUMBER: 60/181,948
; PRIOR FILING DATE: 2002-02-11
; PRIOR APPLICATION NUMBER: 60/189,199
; PRIOR FILING DATE: 2000-03-14
; NUMBER OF SEQ ID NOS: 12
; SOFTWARE: PatentIn version 3.1
; SEQ ID NO 5
; LENGTH: 419
; TYPE: PRT
; ORGANISM: Homo sapiens
US-10-182-263-5

Query Match 98.8%; Score 2296; DB 4; Length 419;
Best Local Similarity 98.8%; Pred. No. 2,2e-188;
Matches 414; Conservative 2; Mismatches 3; Indels 0; Gaps 0;

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QY 1 ANSFLELRHSSLERECEIEICDFEAKELFQVVDVDTLAFMSKIVDQGLVPLEHPCA 60
DB ANSFLELRHSSLERECEIEICDFEAKELFQVVDVDTLAFMSKIVDQGLVPLEHPCA 60
QY 61 SLCCGHTCIDIGISFSCDCSGMGEKFCQREVSFLNCSLDNGGCTHYCLEEYGMRCSC 120
DB SLCCGHTCIDIGISFSCDCSGMGEKFCQREVSFLNCSLDNGGCTHYCLEEYGMRCSC 120
QY 121 APGYKLGDDLLQCHPAVAFPCGPRWMEKESHLKRDTEQEDQVDFPLIDGMTRRGD 180
DB APGYKLGDDLLQCHPAVAFPCGPRWMEKESHLKRDTEQEDQVDFPLIDGMTRRGD 180
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QY 181 SPQVVLDSKKKLAAGAVLHPSWVLTAAHCDSEKSLIVRIGDYDLRMEKWEILDLDI 240
DB SPQVVLDSKKKLAAGAVLHPSWVLTAAHCDSEKSLIVRIGDYDLRMEKWEILDLDI 240
QY 241 KEVFHPNYSKSTTNDIALHLAOPATLSQTVPICLPDSGLAERELNQAQGETLVYGM 300
DB KEVFHPNYSKSTTNDIALHLAOPATLSQTVPICLPDSGLAERELNQAQGETLVYGM 300
QY 301 GYHSSREKAKNRRTFVNFITKIPVYPHNECEVSNMVSNNMLCAGILGRDQACGDS 360
DB GYHSSREKAKNRRTFVNFITKIPVYPHNECEVSNMVSNNMLCAGILGRDQACGDS 360
QY 361 GGPVVASFHGTWFLVGLVSWGEGGLAHNYGYTTKVSRYLDWIHGIIRDEKAPQSNAP 419
DB GGPVVASFHGTWFLVGLVSWGEGGLAHNYGYTTKVSRYLDWIHGIIRDEKAPQSNAP 419
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RESULT 12
5270178-17

; Patent No. 5270178
; APPLICANT: GERLITZ, BRUCE E.; GRINNELL, BRIAN W.
; TITLE OF INVENTION: VECTORS AND COMPOUNDS FOR EXPRESSION OF
; ZMOGEN FORMS OF HUMAN PROTEIN C
; NUMBER OF SEQUENCES: 21
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/07/484,133
; FILING DATE: 23-FEB-1990
; SEQ ID NO:17;
; LENGTH: 461
5270178-17

Query Match 98.6%; Score 2292; DB 6; Length 461;
Best Local Similarity 98.6%; Pred. No. 5,3e-188;
Matches 413; Conservative 3; Mismatches 3; Indels 0; Gaps 0;

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QY 1 ANSFLELRHSSLERECEIEICDFEAKELFQVVDVDTLAFMSKIVDQGLVPLEHPCA 60
DB ANSFLELRHSSLERECEIEICDFEAKELFQVVDVDTLAFMSKIVDQGLVPLEHPCA 102
QY 61 SLCCGHTCIDIGISFSCDCSGMGEKFCQREVSFLNCSLDNGGCTHYCLEEYGMRCSC 120
DB SLCCGHTCIDIGISFSCDCSGMGEKFCQREVSFLNCSLDNGGCTHYCLEEYGMRCSC 162
QY 103 GYHSSREKAKNRRTFVNFITKIPVYPHNECEVSNMVSNNMLCAGILGRDQACGDS 180
DB GYHSSREKAKNRRTFVNFITKIPVYPHNECEVSNMVSNNMLCAGILGRDQACGDS 222
QY 121 APGYKLGDDLLQCHPAVAFPCGPRWMEKESHLKRDTEQEDQVDFPLIDGMTRRGD 180
DB APGYKLGDDLLQCHPAVAFPCGPRWMEKESHLKRDTEQEDQVDFPLIDGMTRRGD 222
QY 163 APGYKLGDDLLQCHPAVAFPCGPRWMEKESHLKRDTEQEDQVDFPLIDGMTRRGD 222
DB APGYKLGDDLLQCHPAVAFPCGPRWMEKESHLKRDTEQEDQVDFPLIDGMTRRGD 222
QY 181 SPQVVLDSKKKLAAGAVLHPSWVLTAAHCDSEKSLIVRIGDYDLRMEKWEILDLDI 240
DB SPQVVLDSKKKLAAGAVLHPSWVLTAAHCDSEKSLIVRIGDYDLRMEKWEILDLDI 282
QY 241 KEVFHPNYSKSTTNDIALHLAOPATLSQTVPICLPDSGLAERELNQAQGETLVYGM 300
DB KEVFHPNYSKSTTNDIALHLAOPATLSQTVPICLPDSGLAERELNQAQGETLVYGM 342
QY 283 KEVFHPNYSKSTTNDIALHLAOPATLSQTVPICLPDSGLAERELNQAQGETLVYGM 342
DB KEVFHPNYSKSTTNDIALHLAOPATLSQTVPICLPDSGLAERELNQAQGETLVYGM 360
QY 301 GYHSSREKAKNRRTFVNFITKIPVYPHNECEVSNMVSNNMLCAGILGRDQACGDS 360
DB GYHSSREKAKNRRTFVNFITKIPVYPHNECEVSNMVSNNMLCAGILGRDQACGDS 402
QY 343 GYHSSREKAKNRRTFVNFITKIPVYPHNECEVSNMVSNNMLCAGILGRDQACGDS 402
DB GYHSSREKAKNRRTFVNFITKIPVYPHNECEVSNMVSNNMLCAGILGRDQACGDS 419
QY 361 GGPVVASFHGTWFLVGLVSWGEGGLAHNYGYTTKVSRYLDWIHGIIRDEKAPQSNAP 419
DB GGPVVASFHGTWFLVGLVSWGEGGLAHNYGYTTKVSRYLDWIHGIIRDEKAPQSNAP 461
```

RESULT 13
5270178-18

; Patent No. 5270178
; APPLICANT: GERLITZ, BRUCE E.; GRINNELL, BRIAN W.
; TITLE OF INVENTION: VECTORS AND COMPOUNDS FOR EXPRESSION OF
; ZMOGEN FORMS OF HUMAN PROTEIN C
; NUMBER OF SEQUENCES: 21
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/07/484,133

/ FILING DATE: 23-FEB-1990
/ SEQ ID NO:18:
/ LENGTH: 461
5270178-18

Query Match 98.6%; Score 2292; DB 6; Length 461;
Best Local Similarity 98.6%; Pred. No. 5.3e-188;
Matches 413; Conservative 3; Mismatches 3; Indels 0; Gaps 0;

QY 1 ANSFLEELRHSLSRECEIEICDFEAKEIFQVNDDTLAFMSKYVDGQCVLPLEHPCA 60
DB ANSFLEELRHSLSRECEIEICDFEAKEIFQVNDDTLAFMSKYVDGQCVLPLEHPCA 102
QY 61 SLCCGHTCIDIGISFSCDCRSGBGRFCQREVSFLNCSLDNGGCTHYCLAEVGRRCSC 120
DB SLCCGHTCIDIGISFSCDCRSGBGRFCQREVSFLNCSLDNGGCTHYCLAEVGRRCSC 162
QY 121 APGYKIGDDLQCHPAVKPCGRPMKREKRSKSLKRDTEDEQVDFRLIDKQKTRRGD 180
DB 163 APGYKIGDDLQCHPAVKPCGRPMKREKRSKSLKRDTEDEQVDFRLIDKQKTRRGD 222
QY 181 SPQVVLDSKKKLAGAVLIHPSWVLTAAHCDDESKLLVRLGSDLRMRWEKWEILDLDI 240
DB 223 SPQVVLDSKKKLAGAVLIHPSWVLTAAHCDDESKLLVRLGSDLRMRWEKWEILDLDI 282
QY 241 KEVFAHPNYSKSTTDNDIALHLAQPATLSQTIYVICLPDPSGLARELNQAGETLVYTGW 300
DB 283 KEVFAHPNYSKSTTDNDIALHLAQPATLSQTIYVICLPDPSGLARELNQAGETLVYTGW 342
QY 301 GHSSREKAKRNTFVLNFIKIPVPHNECEVSNMVSNNMLCAGILGRQDACEGDS 360
DB 343 GHSSREKAKRNTFVLNFIKIPVPHNECEVSNMVSNNMLCAGILGRQDACEGDS 402
QY 361 GGPVASFHGTWFLVGLVSWGEGCLLHNYGVYTKVSRYLDTWIGHIRDKKAPQKSNAP 419
DB 403 GGPVASFHGTWFLVGLVSWGEGCLLHNYGVYTKVSRYLDTWIGHIRDKKAPQKSNAP 461

RESULT 14
US-10-182-263-3
/ Sequence 3, Application US/10182263
/ Patent No. 6630138
/ GENERAL INFORMATION:
/ APPLICANT: Gerlitz, Bruce E
/ APPLICANT: Jones, Bryan E
/ APPLICANT: Grinnell, Brian W
/ TITLE OF INVENTION: PROTEIN C DERIVATIVES
/ FILE REFERENCE: X-13611
/ CURRENT FILING DATE: 2002-07-22
/ PRIOR APPLICATION NUMBER: US/10/182,263
/ PRIOR FILING DATE: 2002-02-11
/ PRIOR APPLICATION NUMBER: 60/181948
/ PRIOR FILING DATE: 2000-03-14
/ NUMBER OF SEQ ID NOS: 12
/ SOFTWARE: PatentIn version 3.1
/ SEQ ID NO 3
/ LENGTH: 419
/ TYPE: PRT
/ ORGANISM: Homo sapiens
US-10-182-263-3

Query Match 98.5%; Score 2290; DB 4; Length 419;
Best Local Similarity 98.6%; Pred. No. 7e-188;
Matches 413; Conservative 2; Mismatches 4; Indels 0; Gaps 0;

QY 1 ANSFLEELRHSLSRECEIEICDFEAKEIFQVNDDTLAFMSKYVDGQCVLPLEHPCA 60
DB 1 ANSFLEELRHSLSRECEIEICDFEAKEIFEDVDDTLAFMSKYVDGQCVLPLEHPCA 60
QY 61 SLCCGHTCIDIGISFSCDCRSGBGRFCQREVSFLNCSLDNGGCTHYCLAEVGRRCSC 120
DB 61 SLCCGHTCIDIGISFSCDCRSGBGRFCQREVSFLNCSLDNGGCTHYCLAEVGRRCSC 120

QY 121 APGYKIGDDLQCHPAVKPCGRPMKREKRSKSLKRDTEDEQVDFRLIDKQKTRRGD 180
DB 121 APGYKIGDDLQCHPAVKPCGRPMKREKRSKSLKRDTEDEQVDFRLIDKQKTRRGD 180
QY 181 SPQVVLDSKKKLAGAVLIHPSWVLTAAHCDDESKLLVRLGSDLRMRWEKWEILDLDI 240
DB 181 SPQVVLDSKKKLAGAVLIHPSWVLTAAHCDDESKLLVRLGSDLRMRWEKWEILDLDI 240
QY 241 KEVFAHPNYSKSTTDNDIALHLAQPATLSQTIYVICLPDPSGLARELNQAGETLVYTGW 300
DB 241 KEVFAHPNYSKSTTDNDIALHLAQPATLSQTIYVICLPDPSGLARELNQAGETLVYTGW 300
QY 301 GHSSREKAKRNTFVLNFIKIPVPHNECEVSNMVSNNMLCAGILGRQDACEGDS 360
DB 301 GHSSREKAKRNTFVLNFIKIPVPHNECEVSNMVSNNMLCAGILGRQDACEGDS 360
QY 361 GGPVASFHGTWFLVGLVSWGEGCLLHNYGVYTKVSRYLDTWIGHIRDKKAPQKSNAP 419
DB 361 GGPVASFHGTWFLVGLVSWGEGCLLHNYGVYTKVSRYLDTWIGHIRDKKAPQKSNAP 419

RESULT 15
US-10-182-263-6
/ Sequence 5, Application US/10182263
/ Patent No. 6630138
/ GENERAL INFORMATION:
/ APPLICANT: Gerlitz, Bruce E
/ APPLICANT: Jones, Bryan E
/ APPLICANT: Grinnell, Brian W
/ TITLE OF INVENTION: PROTEIN C DERIVATIVES
/ FILE REFERENCE: X-13611
/ CURRENT APPLICATION NUMBER: US/10/182,263
/ CURRENT FILING DATE: 2002-07-22
/ PRIOR APPLICATION NUMBER: 60/181948
/ PRIOR FILING DATE: 2002-02-11
/ PRIOR APPLICATION NUMBER: 60/189199
/ PRIOR FILING DATE: 2000-03-14
/ NUMBER OF SEQ ID NOS: 12
/ SOFTWARE: PatentIn version 3.1
/ SEQ ID NO 6
/ LENGTH: 419
/ TYPE: PRT
/ ORGANISM: Homo sapiens
US-10-182-263-6

Query Match 98.5%; Score 2288; DB 4; Length 419;
Best Local Similarity 98.6%; Pred. No. 1e-187;
Matches 413; Conservative 2; Mismatches 4; Indels 0; Gaps 0;

QY 1 ANSFLEELRHSLSRECEIEICDFEAKEIFQVNDDTLAFMSKYVDGQCVLPLEHPCA 60
DB 1 ANSFLEELRHSLSRECEIEICDFEAKEIFEDVDDTLAFMSKYVDGQCVLPLEHPCA 60
QY 61 SLCCGHTCIDIGISFSCDCRSGBGRFCQREVSFLNCSLDNGGCTHYCLAEVGRRCSC 120
DB 61 SLCCGHTCIDIGISFSCDCRSGBGRFCQREVSFLNCSLDNGGCTHYCLAEVGRRCSC 120
QY 121 APGYKIGDDLQCHPAVKPCGRPMKREKRSKSLKRDTEDEQVDFRLIDKQKTRRGD 180
DB 121 APGYKIGDDLQCHPAVKPCGRPMKREKRSKSLKRDTEDEQVDFRLIDKQKTRRGD 180
QY 181 SPQVVLDSKKKLAGAVLIHPSWVLTAAHCDDESKLLVRLGSDLRMRWEKWEILDLDI 240
DB 181 SPQVVLDSKKKLAGAVLIHPSWVLTAAHCDDESKLLVRLGSDLRMRWEKWEILDLDI 240
QY 241 KEVFAHPNYSKSTTDNDIALHLAQPATLSQTIYVICLPDPSGLARELNQAGETLVYTGW 300
DB 241 KEVFAHPNYSKSTTDNDIALHLAQPATLSQTIYVICLPDPSGLARELNQAGETLVYTGW 300
QY 301 GHSSREKAKRNTFVLNFIKIPVPHNECEVSNMVSNNMLCAGILGRQDACEGDS 360
DB 301 GHSSREKAKRNTFVLNFIKIPVPHNECEVSNMVSNNMLCAGILGRQDACEGDS 360

QY 361 GGPWVASFHGTWFLVGLVSWGEGGGLHNYGYVTVKSRYLDMWIGHIRDKKAPQKSNAP 419
Db 361 GGPWVASFHGTWFLVGLVSWGEGGGLHNYGYVTVKSRYLDMWIGHIRDKKAPQKSNAP 419

RESULT 16
5270178-13
; Patent No. 5270178
; APPLICANT: GERLITZ, BRUCE E., GRINNELL, BRIAN W.
; TITLE OF INVENTION: VECTORS AND COMPOUNDS FOR EXPRESSION OF
; ZYMOMEN FORMS OF HUMAN PROTEIN C
; NUMBER OF SEQUENCES: 21
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/07/484,133
; FILING DATE: 23-FEB-1990
; SEQ ID NO:13:
; LENGTH: 460
5270178-13

Query Match 98.4%; Score 2286.5; DB 6; Length 460;
Best Local Similarity 98.6%; Pred. No. 1.6e-187;
Matches 413; Conservative 3; Mismatches 2; Indels 1; Gaps 1;

QY 1 ANSFLBELRHSSLERECIEICDFEAKKIFQNVDDTLAFMSKRVGQCVLPLEHPCA 60
Db 43 ANSFLBELRHSSLERECIEICDFEAKKIFQNVDDTLAFMSKRVGQCVLPLEHPCA 102
QY 61 SLCCGHTCTIDIGISFSCDCRSWGEGRFGQREVSFLNCSLDNGCCTHYCLEEVGRRSC 120
Db 103 SLCCGHTCTIDIGISFSCDCRSWGEGRFGQREVSFLNCSLDNGCCTHYCLEEVGRRSC 162
QY 121 APGYKGGDLDLQCHPAVKEPCGRPMKMKKSHLKRDTEQEDQVDPRLIDGKMTRRGD 180
Db 163 APGYKGGDLDLQCHPAVKEPCGRPMKMKKSHLKRDTEQEDQVDPRLIDGKMTRRGD 221
QY 181 SPWQVVLDSKKKLAGAVLHPSWVLTAAHCDSESKLVLRGEYDLRRMEKWEELDDI 240
Db 222 SPWQVVLDSKKKLAGAVLHPSWVLTAAHCDSESKLVLRGEYDLRRMEKWEELDDI 281
QY 241 KEVFNHNYSKSTTNDIALHLAQPATLSQTTIVICLPDSGLAEELNQAQGETLVYGM 300
Db 282 KEVFNHNYSKSTTNDIALHLAQPATLSQTTIVICLPDSGLAEELNQAQGETLVYGM 341
QY 301 GYHSRREKAKRRFTVNFILKIPVPHNEGSEVSNVSNMLCAGLIGDRQDACEGDS 360
Db 342 GYHSRREKAKRRFTVNFILKIPVPHNEGSEVSNVSNMLCAGLIGDRQDACEGDS 401
QY 361 GGPWVASFHGTWFLVGLVSWGEGGGLHNYGYVTVKSRYLDMWIGHIRDKKAPQKSNAP 419
Db 402 GGPWVASFHGTWFLVGLVSWGEGGGLHNYGYVTVKSRYLDMWIGHIRDKKAPQKSNAP 460

RESULT 17
5270178-14
; Patent No. 5270178
; APPLICANT: GERLITZ, BRUCE E., GRINNELL, BRIAN W.
; TITLE OF INVENTION: VECTORS AND COMPOUNDS FOR EXPRESSION OF
; ZYMOMEN FORMS OF HUMAN PROTEIN C
; NUMBER OF SEQUENCES: 21
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/07/484,133
; FILING DATE: 23-FEB-1990
; SEQ ID NO:14:
; LENGTH: 460
5270178-14

Query Match 98.4%; Score 2286.5; DB 6; Length 460;
Best Local Similarity 98.6%; Pred. No. 1.6e-187;
Matches 413; Conservative 3; Mismatches 2; Indels 1; Gaps 1;

QY 1 ANSFLBELRHSSLERECIEICDFEAKKIFQNVDDTLAFMSKRVGQCVLPLEHPCA 60
|||||

Db 43 ANSFLBELRHSSLERECIEICDFEAKKIFQNVDDTLAFMSKRVGQCVLPLEHPCA 102
QY 61 SLCCGHTCTIDIGISFSCDCRSWGEGRFGQREVSFLNCSLDNGCCTHYCLEEVGRRSC 120
Db 103 SLCCGHTCTIDIGISFSCDCRSWGEGRFGQREVSFLNCSLDNGCCTHYCLEEVGRRSC 162
QY 121 APGYKGGDLDLQCHPAVKEPCGRPMKMKKSHLKRDTEQEDQVDPRLIDGKMTRRGD 180
Db 163 APGYKGGDLDLQCHPAVKEPCGRPMKMKKSHLKRDTEQEDQVDPRLIDGKMTRRGD 221
QY 181 SPWQVVLDSKKKLAGAVLHPSWVLTAAHCDSESKLVLRGEYDLRRMEKWEELDDI 240
Db 222 SPWQVVLDSKKKLAGAVLHPSWVLTAAHCDSESKLVLRGEYDLRRMEKWEELDDI 281
QY 241 KEVFNHNYSKSTTNDIALHLAQPATLSQTTIVICLPDSGLAEELNQAQGETLVYGM 300
Db 282 KEVFNHNYSKSTTNDIALHLAQPATLSQTTIVICLPDSGLAEELNQAQGETLVYGM 341
QY 301 GYHSRREKAKRRFTVNFILKIPVPHNEGSEVSNVSNMLCAGLIGDRQDACEGDS 360
Db 342 GYHSRREKAKRRFTVNFILKIPVPHNEGSEVSNVSNMLCAGLIGDRQDACEGDS 401
QY 361 GGPWVASFHGTWFLVGLVSWGEGGGLHNYGYVTVKSRYLDMWIGHIRDKKAPQKSNAP 419
Db 402 GGPWVASFHGTWFLVGLVSWGEGGGLHNYGYVTVKSRYLDMWIGHIRDKKAPQKSNAP 460

RESULT 18
US-10-182-263-4
; Sequence 4; Application US/10182263
; Patent No. 6610138
; GENERAL INFORMATION:
; APPLICANT: Gerlitz, Bruce E
; APPLICANT: Jones, Bryan E
; APPLICANT: Grinnell, Brian W
; TITLE OF INVENTION: PROTEIN C DERIVATIVES
; FILE REFERENCE: X-13611
; CURRENT APPLICATION NUMBER: US/10/182,263
; PRIOR FILING DATE: 2002-07-22
; PRIOR APPLICATION NUMBER: 60/181948
; PRIOR FILING DATE: 2002-02-11
; PRIOR APPLICATION NUMBER: 60/189199
; PRIOR FILING DATE: 2000-03-14
; NUMBER OF SEQ IDS: 12
; SOFTWARE: PatentIn version 3.1
; SEQ ID NO 4
; LENGTH: 419
; TYPE: PRT
; ORGANISM: Homo sapiens
US-10-182-263-4

Query Match 98.4%; Score 2286; DB 4; Length 419;
Best Local Similarity 98.3%; Pred. No. 1.5e-187;
Matches 412; Conservative 3; Mismatches 4; Indels 0; Gaps 0;

QY 1 ANSFLBELRHSSLERECIEICDFEAKKIFQNVDDTLAFMSKRVGQCVLPLEHPCA 60
Db 1 ANSFLBELRHSSLERECIEICDFEAKKIFQNVDDTLAFMSKRVGQCVLPLEHPCA 60
QY 61 SLCCGHTCTIDIGISFSCDCRSWGEGRFGQREVSFLNCSLDNGCCTHYCLEEVGRRSC 120
Db 61 SLCCGHTCTIDIGISFSCDCRSWGEGRFGQREVSFLNCSLDNGCCTHYCLEEVGRRSC 120
QY 121 APGYKGGDLDLQCHPAVKEPCGRPMKMKKSHLKRDTEQEDQVDPRLIDGKMTRRGD 180
Db 121 APGYKGGDLDLQCHPAVKEPCGRPMKMKKSHLKRDTEQEDQVDPRLIDGKMTRRGD 180
QY 181 SPWQVVLDSKKKLAGAVLHPSWVLTAAHCDSESKLVLRGEYDLRRMEKWEELDDI 240
Db 181 SPWQVVLDSKKKLAGAVLHPSWVLTAAHCDSESKLVLRGEYDLRRMEKWEELDDI 240
QY 241 KEVFNHNYSKSTTNDIALHLAQPATLSQTTIVICLPDSGLAEELNQAQGETLVYGM 300
|||||

DB 241 KEVFEHENVSKTSNDIALHLAQPATLSQITVPCLPDSGLAEELNQAQETLVGM 300
QY 301 GHSSREKAEKRNKTYVNFITKIPVPHNECSVSNVSNMTCAGITGDDQDCEDS 360
DB 301 GHSSREKAEKRNKTYVNFITKIPVPHNECSVSNVSNMTCAGITGDDQDCEDS 360
QY 361 GGPVWASPHGTWFLVGLVSMGCGGLAHNGVYTKVSRYLDMHGHIRDEKAPQKSNAP 419
DB 361 GGPVWASPHGTWFLVGLVSMGCGGLAHNGVYTKVSRYLDMHGHIRDEKAPQKSNAP 419

RESULT 19

US-09-065-872-1
Sequence 1, Application US/09065872
Patent No. 6162629

GENERAL INFORMATION:

APPLICANT: Baker, Jeffrey C
APPLICANT: Carlson, Andrew D
APPLICANT: Huang, Lihua
APPLICANT: Shelliga, Theodore A
TITLE OF INVENTION: Improved Methods for Processing Activated Protein C
FILE REFERENCE: APC process patent
CURRENT APPLICATION NUMBER: US/09/065,872
CURRENT FILING DATE: 1998-04-24
EARLIER APPLICATION NUMBER: 60/045,255
EARLIER FILING DATE: 1997-04-28
NUMBER OF SEQ ID NOS: 2
SOFTWARE: PatentIn Ver. 2.0
SEQ ID NO 1
LENGTH: 410
TYPE: PRT
ORGANISM: Homo sapiens
US-09-065-872-1

Query Match 98.1%; Score 2281, DB 3; Length 410;
Best Local Similarity 100.0%; Pred. No. 4e-187;
Matches 410; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 10 HSSLRECEIEICDPEEAKETIPONVDPTLAFMSKRVNDGQCLVPLHPCASLCCGHGTC 69
DB 1 HSSLRECEIEICDPEEAKETIPONVDPTLAFMSKRVNDGQCLVPLHPCASLCCGHGTC 60
QY 70 IDIGSFSCDGRSGWGRFCQREVSVFLNCSLDNGGCTHYCLEEVWRRCSGAPGYKLGDD 129
DB 61 IDIGSFSCDGRSGWGRFCQREVSVFLNCSLDNGGCTHYCLEEVWRRCSGAPGYKLGDD 120
QY 130 LLOCHPAVYFPCGRPMKRMKRSKSLKQDTEQDQDVPRLIDGMTRRGSFMYQVVLDD 189
DB 121 LLOCHPAVYFPCGRPMKRMKRSKSLKQDTEQDQDVPRLIDGMTRRGSFMYQVVLDD 180
QY 190 SKKLLACGAVLHPHFWLTAHGMDSKKLVRLGEYDLRMEKMLDLDIKEVFNHPY 249
DB 181 SKKLLACGAVLHPHFWLTAHGMDSKKLVRLGEYDLRMEKMLDLDIKEVFNHPY 240
QY 250 SKSTNDIALHLAQPATLSQITVPCLPDSGLAEELNQAQETLVGMGHSSREKE 309
DB 241 SKSTNDIALHLAQPATLSQITVPCLPDSGLAEELNQAQETLVGMGHSSREKE 300
QY 310 AKRRTFVNFITKIPVPHNECSVSNVSNMTCAGITGDDQDCEDSGGPVWASPH 369
DB 301 AKRRTFVNFITKIPVPHNECSVSNVSNMTCAGITGDDQDCEDSGGPVWASPH 360
QY 370 GTWFLVGLVSMGCGGLAHNGVYTKVSRYLDMHGHIRDEKAPQKSNAP 419
DB 361 GTWFLVGLVSMGCGGLAHNGVYTKVSRYLDMHGHIRDEKAPQKSNAP 410

RESULT 20

US-09-667-570A-1
Sequence 1, Application US/09667570A
Patent No. 6436397

GENERAL INFORMATION:

APPLICANT: Baker, Jeffrey C

APPLICANT: Carlson, Andrew D
APPLICANT: Huang, Lihua
APPLICANT: Shelliga, Theodore A
TITLE OF INVENTION: Improved Methods for Processing Activated Protein C
FILE REFERENCE: X-11796A
CURRENT APPLICATION NUMBER: US/09/667,570A
CURRENT FILING DATE: 2000-09-21
PRIOR APPLICATION NUMBER: 60/045,255
PRIOR FILING DATE: 1997-04-28
NUMBER OF SEQ ID NOS: 3
SOFTWARE: PatentIn version 3.1
SEQ ID NO 1
LENGTH: 410
TYPE: PRT
ORGANISM: Homo sapiens
US-09-667-570A-1

Query Match 98.1%; Score 2279, DB 4; Length 410;
Best Local Similarity 100.0%; Pred. No. 4e-187;
Matches 410; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 10 HSSLRECEIEICDPEEAKETIPONVDPTLAFMSKRVNDGQCLVPLHPCASLCCGHGTC 69
DB 1 HSSLRECEIEICDPEEAKETIPONVDPTLAFMSKRVNDGQCLVPLHPCASLCCGHGTC 60
QY 70 IDIGSFSCDGRSGWGRFCQREVSVFLNCSLDNGGCTHYCLEEVWRRCSGAPGYKLGDD 129
DB 61 IDIGSFSCDGRSGWGRFCQREVSVFLNCSLDNGGCTHYCLEEVWRRCSGAPGYKLGDD 120
QY 130 LLOCHPAVYFPCGRPMKRMKRSKSLKQDTEQDQDVPRLIDGMTRRGSFMYQVVLDD 189
DB 121 LLOCHPAVYFPCGRPMKRMKRSKSLKQDTEQDQDVPRLIDGMTRRGSFMYQVVLDD 180
QY 190 SKKLLACGAVLHPHFWLTAHGMDSKKLVRLGEYDLRMEKMLDLDIKEVFNHPY 249
DB 181 SKKLLACGAVLHPHFWLTAHGMDSKKLVRLGEYDLRMEKMLDLDIKEVFNHPY 240
QY 250 SKSTNDIALHLAQPATLSQITVPCLPDSGLAEELNQAQETLVGMGHSSREKE 309
DB 241 SKSTNDIALHLAQPATLSQITVPCLPDSGLAEELNQAQETLVGMGHSSREKE 300
QY 310 AKRRTFVNFITKIPVPHNECSVSNVSNMTCAGITGDDQDCEDSGGPVWASPH 369
DB 301 AKRRTFVNFITKIPVPHNECSVSNVSNMTCAGITGDDQDCEDSGGPVWASPH 360
QY 370 GTWFLVGLVSMGCGGLAHNGVYTKVSRYLDMHGHIRDEKAPQKSNAP 419
DB 361 GTWFLVGLVSMGCGGLAHNGVYTKVSRYLDMHGHIRDEKAPQKSNAP 410

RESULT 21

5270178-2
Patent No. 5270178

APPLICANT: GERLITZ, BRUCE R., GRINNELL, BRIAN W.

TITLE OF INVENTION: VECTORS AND COMPOUNDS FOR EXPRESSION OF

ZYMOMEN FORMS OF HUMAN PROTEIN C

NUMBER OF SEQUENCES: 21

CURRENT APPLICATION DATA:

APPLICATION NUMBER: US/07/484,133

FILING DATE: 23-FEB-1990

SEQ ID NO: 2

LENGTH: 461

5270178-2

Query Match 98.1%; Score 2279.5; DB 6; Length 461;
Best Local Similarity 99.0%; Pred. No. 6.3e-187;
Matches 416; Conservative 0; Mismatches 3; Indels 1; Gaps 1;

QY 1 ANSFLEIRKSSLERCEIEICDPEEAKETIPONVDPTLAFMSKRVNDGQCLVPLHPCA 60
DB 42 ANSFLEIRKSSLERCEIEICDPEEAKETIPONVDPTLAFMSKRVNDGQCLVPLHPCA 101
QY 61 SLCCGHGTCIDIGSFSCDGRSGWGRFCQREVSVFLNCSLDNGGCTHYCLEEVWRRCSG 120

Db 102 SLCCGHGTCDIGISFSCDCSSGMBRPGREVSPLNCSLDNGCTHYCLEBVMRRCSC 161
Qy 121 APYKLGDDILQCHPAVFPQGRNMEKESKSHKDTEDQEDQVDPRLDGMTRRGD 180
Db 162 APYKLGDDILQCHPAVFPQGRNMEKESKSHKDTEDQEDQVDPRLDGMTRRGD 221
Qy 181 SPWQVVLDSKKLACGAVLIHPSWVLTAAHGMDESKLIVRAGEYDLRREKWEILDLD 240
Db 222 SPWQVVLDSKKLACGAVLIHPSWVLTAAHGMDESKLIVRAGEYDLRREKWEILDLD 281
Qy 241 KEVFAHNSKSTTNDIALHLAQPATLSQTIIVICLPDSGLAERELNOAQGETIVTGM 300
Db 282 KEVFAHNSKSTTNDIALHLAQPATLSQTIIVICLPDSGLAERELNOAQGETIVTGM 341
Qy 301 GYHSSREKAKRRTFTVNFIKIPVPHNECEVMSNMVSENNLCAGILGRDQACGDS 360
Db 342 GYHSSREKAKRRTFTVNFIKIPVPHNECEVMSNMVSENNLCAGILGRDQACGDS 401
Qy 361 GGPVVASFHGTWFLVGLVSWGEG-CGLHNYSYTKVSRYLDMTHGIRDKKAPQKSWAP 415
Db 402 GGPVVASFHGTWFLVGLVSWGEGCGLHNYSYTKVSRYLDMTHGIRDKKAPQKSWAP 461

RESULT 22
US-09-065-872-2
; Sequence 2, Application US/09065872
; Patent No. 6162629
; GENERAL INFORMATION:
; APPLICANT: Baker, Jeffrey C
; APPLICANT: Carlson, Andrew D
; APPLICANT: Huang, Lihua
; APPLICANT: Shellig, Theodore A
; TITLE OF INVENTION: Improved Methods for Processing Activated Protein C
; FILE REFERENCE: a/c process patent
; CURRENT APPLICATION NUMBER: US/09/065,872
; CURRENT FILING DATE: 1998-04-24
; EARLIER APPLICATION NUMBER: 60/045,255
; EARLIER FILING DATE: 1997-04-28
; NUMBER OF SEQ ID NOS: 2
; SOFTWARE: Patentln Ver. 2.0
; SEQ ID NO 2
; LENGTH: 409
; TYPE: PRT
; ORGANISM: Homo sapiens
us-09-065-872-2

Query Match 97.8%; Score 2273; DB 3; Length 409;
Best Local Similarity 100.0%; Pred. No. 1.9e-186;
Matches 409; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 11 SLSRECEIEICDFEBAKEIFQNVDDTLAFWSKRVHDGQCVLPLEHPCASLCCGHGTCT 70
Db 1 SLSRECEIEICDFEBAKEIFQNVDDTLAFWSKRVHDGQCVLPLEHPCASLCCGHGTCT 60
Qy 71 DGISFSCDCRSGMBRPGOREVSLNCSLDNGCTHYCLEBVMRRCSCAPGYKLGDDL 130
Db 61 DGISFSCDCRSGMBRPGOREVSLNCSLDNGCTHYCLEBVMRRCSCAPGYKLGDDL 120
Qy 131 LQCHPAVFPQGRNMEKESKSHKDTEDQEDQVDPRLDGMTRRGDSPMQVVLDS 190
Db 121 LQCHPAVFPQGRNMEKESKSHKDTEDQEDQVDPRLDGMTRRGDSPMQVVLDS 180
Qy 191 KKLACGAVLIHPSWVLTAAHGMDESKLIVRAGEYDLRREKWEILDLDIKXEVFHPNYS 250
Db 181 KKLACGAVLIHPSWVLTAAHGMDESKLIVRAGEYDLRREKWEILDLDIKXEVFHPNYS 240
Qy 251 KSTTNDIALHLAQPATLSQTIIVICLPDSGLAERELNOAQGETIVTGMGYHSSREKKA 310
Db 241 KSTTNDIALHLAQPATLSQTIIVICLPDSGLAERELNOAQGETIVTGMGYHSSREKKA 300
Qy 311 KNRFTVNFIKIPVPHNECEVMSNMVSENNLCAGILGRDQACGDSGGPMVASFHG 370

Db 301 KNRFTVNFIKIPVPHNECEVMSNMVSENNLCAGILGRDQACGDSGGPMVASFHG 360
Qy 371 TWFLVGLVSWGEGCGLHNYSYTKVSRYLDMTHGIRDKKAPQKSWAP 419
Db 361 TWFLVGLVSWGEGCGLHNYSYTKVSRYLDMTHGIRDKKAPQKSWAP 409

RESULT 23
US-09-667-570A-2
; Sequence 2, Application US/09667570A
; Patent No. 6436397
; GENERAL INFORMATION:
; APPLICANT: Baker, Jeffrey C
; APPLICANT: Carlson, Andrew D
; APPLICANT: Huang, Lihua
; APPLICANT: Shellig, Theodore A
; TITLE OF INVENTION: Improved Methods for Processing Activated Protein C
; FILE REFERENCE: X-11796A
; CURRENT APPLICATION NUMBER: US/09/667,570A
; CURRENT FILING DATE: 2000-09-21
; PRIOR FILING DATE: 1997-04-28
; NUMBER OF SEQ ID NOS: 3
; SOFTWARE: Patentln version 3.1
; SEQ ID NO 2
; LENGTH: 409
; TYPE: PRT
; ORGANISM: Homo sapiens
us-09-667-570A-2

Query Match 97.8%; Score 2273; DB 4; Length 409;
Best Local Similarity 100.0%; Pred. No. 1.9e-186;
Matches 409; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 11 SLSRECEIEICDFEBAKEIFQNVDDTLAFWSKRVHDGQCVLPLEHPCASLCCGHGTCT 70
Db 1 SLSRECEIEICDFEBAKEIFQNVDDTLAFWSKRVHDGQCVLPLEHPCASLCCGHGTCT 60
Qy 71 DGISFSCDCRSGMBRPGOREVSLNCSLDNGCTHYCLEBVMRRCSCAPGYKLGDDL 130
Db 61 DGISFSCDCRSGMBRPGOREVSLNCSLDNGCTHYCLEBVMRRCSCAPGYKLGDDL 120
Qy 131 LQCHPAVFPQGRNMEKESKSHKDTEDQEDQVDPRLDGMTRRGDSPMQVVLDS 190
Db 121 LQCHPAVFPQGRNMEKESKSHKDTEDQEDQVDPRLDGMTRRGDSPMQVVLDS 180
Qy 191 KKLACGAVLIHPSWVLTAAHGMDESKLIVRAGEYDLRREKWEILDLDIKXEVFHPNYS 250
Db 181 KKLACGAVLIHPSWVLTAAHGMDESKLIVRAGEYDLRREKWEILDLDIKXEVFHPNYS 240
Qy 251 KSTTNDIALHLAQPATLSQTIIVICLPDSGLAERELNOAQGETIVTGMGYHSSREKKA 310
Db 241 KSTTNDIALHLAQPATLSQTIIVICLPDSGLAERELNOAQGETIVTGMGYHSSREKKA 300
Qy 311 KNRFTVNFIKIPVPHNECEVMSNMVSENNLCAGILGRDQACGDSGGPMVASFHG 370
Db 301 KNRFTVNFIKIPVPHNECEVMSNMVSENNLCAGILGRDQACGDSGGPMVASFHG 360
Qy 371 TWFLVGLVSWGEGCGLHNYSYTKVSRYLDMTHGIRDKKAPQKSWAP 419
Db 361 TWFLVGLVSWGEGCGLHNYSYTKVSRYLDMTHGIRDKKAPQKSWAP 409

RESULT 24
5270178-15
; Patent No. 5270178
; APPLICANT: GERLITZ, BRUCE E., GRINNELL, BRIAN W.
; TITLE OF INVENTION: VECTORS AND COMPOUNDS FOR EXPRESSION OF
; ZYMOGEN FORMS OF HUMAN PROTEIN C
; NUMBER OF SEQUENCES: 21
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/07/484,133
; FILING DATE: 23-FEB-1990

; SEQ ID NO:15;
; LENGTH: 460
5270178-15

Query Match
Best Local Similarity 97.7%; Score 2271.5; DB 6; Length 460;
Matches 411; Conservative 3; Mismatches 4; Indels 1; Gaps 1;

QY 1 ANSFLELRHSLSRECEIEICDFEBAKEIFQVNDTTLAFMSKVDGQCLVPLEHCA 60
DB 43 ANSFLELRHSLSRECEIEICDFEBAKEIFQVNDTTLAFMSKVDGQCLVPLEHCA 102
QY 61 SLCCGHGTCIDIGISFSCDCRSQMGWGRFCQREVSPINCSLNGGCTHYCLEEVGRRCSC 120
DB 103 SLCCGHGTCIDIGISFSCDCRSQMGWGRFCQREVSPINCSLNGGCTHYCLEEVGRRCSC 162
QY 121 APGYKLGDDLQCHPAVKPCGRPKWMEKRSKRLKRDTEQDEQVDPRLIDGKXTRGD 180
DB 163 APGYKLGDDLQCHPAVKPCGRPKWMEKRSKRLKRDTEQDEQVDPRLIDGKXTRGD 221
QY 181 SPQVYVLLDSKKKLACGAVLIHPSWVLTAAHCDSESKLIVRLGEYDLRNEKWELEDI 240
DB 222 SPQVYVLLDSKKKLACGAVLIHPSWVLTAAHCDSESKLIVRLGEYDLRNEKWELEDI 281
QY 241 KEVYVHPNYSKSTTNDIALHLAQPATLSQTIIVPICLPSGLARELINAQGETLVYGW 300
DB 282 KEVYVHPNYSKSTTNDIALHLAQPATLSQTIIVPICLPSGLARELINAQGETLVYGW 341
QY 301 GYHSREKEAKRNRTFYANFIKIPVPHNCSWMSNMVSENNLCAGILGDRQDCEGDS 360
DB 342 GYHSREKEAKRNRTFYANFIKIPVPHNCSWMSNMVSENNLCAGILGDRQDCEGDS 401
QY 361 GGPVYASFHGTWFLVGVSMGBCGLLNNGVYTKVSRYLDMIGHIRDEAPQKSNAP 419
DB 402 GGPVYASFHGTWFLVGVSMGBCGLLNNGVYTKVSRYLDMIGHIRDEAPQKSNAP 460

RESULT 25
5270178-16
; Patent No. 5270178
; APPLICANT: GERLITZ, BRUCE E.; GRINNELL, BRIAN W.
; TITLE OF INVENTION: VECTORS AND COMPOUNDS FOR EXPRESSION OF
; ZMOGEN FORMS OF HUMAN PROTEIN C
; NUMBER OF SEQUENCES: 21
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/07/484,133
; FILING DATE: 23-FEB-1990
; SEQ ID NO:16;
; LENGTH: 460
5270178-16

Query Match
Best Local Similarity 97.1%; Score 2244.5; DB 6; Length 460;
Matches 407; Conservative 4; Mismatches 7; Indels 1; Gaps 1;

QY 1 ANSFLELRHSLSRECEIEICDFEBAKEIFQVNDTTLAFMSKVDGQCLVPLEHCA 60
DB 43 ANSFLELRHSLSRECEIEICDFEBAKEIFQVNDTTLAFMSKVDGQCLVPLEHCA 102
QY 61 SLCCGHGTCIDIGISFSCDCRSQMGWGRFCQREVSPINCSLNGGCTHYCLEEVGRRCSC 120
DB 103 SLCCGHGTCIDIGISFSCDCRSQMGWGRFCQREVSPINCSLNGGCTHYCLEEVGRRCSC 162
QY 121 APGYKLGDDLQCHPAVKPCGRPKWMEKRSKRLKRDTEQDEQVDPRLIDGKXTRGD 180
DB 163 APGYKLGDDLQCHPAVKPCGRPKWMEKRSKRLKRDTEQDEQVDPRLIDGKXTRGD 221
QY 181 SPQVYVLLDSKKKLACGAVLIHPSWVLTAAHCDSESKLIVRLGEYDLRNEKWELEDI 240
DB 222 SPQVYVLLDSKKKLACGAVLIHPSWVLTAAHCDSESKLIVRLGEYDLRNEKWELEDI 281
QY 241 KEVYVHPNYSKSTTNDIALHLAQPATLSQTIIVPICLPSGLARELINAQGETLVYGW 300

DB 282 KEVYVHPNYSKSTTNDIALHLAQPATLSQTIIVPICLPSGLARELINAQGETLVYGW 341
QY 301 GYHSREKEAKRNRTFYANFIKIPVPHNCSWMSNMVSENNLCAGILGDRQDCEGDS 360
DB 342 GYHSREKEAKRNRTFYANFIKIPVPHNCSWMSNMVSENNLCAGILGDRQDCEGDS 401
QY 361 GGPVYASFHGTWFLVGVSMGBCGLLNNGVYTKVSRYLDMIGHIRDEAPQKSNAP 419
DB 402 GGPVYASFHGTWFLVGVSMGBCGLLNNGVYTKVSRYLDMIGHIRDEAPQKSNAP 460

RESULT 26
US-07-720-189-1
; Sequence 1, Application US/07720189
; Patent No. 5279956
; GENERAL INFORMATION:
; APPLICANT: Griffin, John H.
; APPLICANT: Meesters, Rolf M.
; TITLE OF INVENTION: APC POLYPEPTIDES AND ANTI-PEPTIDE
; TITLE OF INVENTION: ANTIBODIES, DIAGNOSTIC METHODS AND SYSTEMS FOR INHIBITING
; NUMBER OF SEQUENCES: 11
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: The Scripps Research Institute, Office of Patent
; ADDRESSEE: Counsel
; STREET: 3366 No. 5279956th Torrey Pines Court, Suite 240
; CITY: La Jolla
; STATE: CA
; COUNTRY: USA
; ZIP: 92037
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: PatentIn Release #1.0, Version #1.25
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/07/720,189
; FILING DATE: 19910724
; CLASSIFICATION: 530
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER:
; FILING DATE:
; ATTORNEY/AGENT INFORMATION:
; NAME: Bingham, Douglas
; REGISTRATION NUMBER: 32,457
; REFERENCE/DOCKET NUMBER: SCR0390P
; TELEPHONE: 619-554-2937
; INFORMATION FOR SEQ ID NO: 1:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 262 amino acids
; TYPE: AMINO ACID
; STRANDEDNESS: single
; TOPOLOGY: unknown
; MOLECULE TYPE: protein
; NAME/KEY: Region
; LOCATION: 1..262
; OTHER INFORMATION:
; OTHER INFORMATION: /note="In SEQ ID NO 1 is the sequence for the PC heavy chain, the amino acid residue positions of which begin at position 158 and end at 419."
US-07-720-189-1

Query Match
Best Local Similarity 100.0%; Score 1419; DB 1; Length 262;
Matches 262; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 158 DTEDQEDVDPRLIDGKXTRGDSPQVYVLLDSKKKLACGAVLIHPSWVLTAAHCDSESK 217
DB 1 DTEDQEDVDPRLIDGKXTRGDSPQVYVLLDSKKKLACGAVLIHPSWVLTAAHCDSESK 60
QY 218 KILVRLGEYDLRNEKWELEDIKEVYVHPNYSKSTTNDIALHLAQPATLSQTIIVPIC 277

Db 61 KLVRLGEYDLRRMEKELDLIDKEVFNHVNYSKSTINDIALHLAQPATLSQTIIVPIC 120
Qy 278 LPDSGLARELNQAQGETLVYGMGYHSSREKAKRRTFVNLFIKIPVPHNECSEVMSN 337
Db 121 LPDSGLARELNQAQGETLVYGMGYHSSREKAKRRTFVNLFIKIPVPHNECSEVMSN 180
Qy 338 MVSNNMLCAGILGDRQDACEGDSGSPVVASFHGTWFLVGLVSWGCGGLHNYGYTTKVS 397
Db 181 MVSNNMLCAGILGDRQDACEGDSGSPVVASFHGTWFLVGLVSWGCGGLHNYGYTTKVS 240
Qy 398 RYLDWIGHIRDRKEAPKXSWAP 419
Db 241 RYLDWIGHIRDRKEAPKXSWAP 262

RESULT 27
5270178-19
Patent No. 5270178
APPLICANT: GERLITZ, BRUCE E.; GRINNELL, BRIAN W.
TITLE OF INVENTION: VECTORS AND COMPOUNDS FOR EXPRESSION OF
ZYMOGEN FORMS OF HUMAN PROTEIN C
NUMBER OF SEQUENCES: 21
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/07/484,133
FILING DATE: 23-FEB-1990
SEQ ID NO:19
LENGTH: 261

Query Match 60.0%; Score 1393.5; DB 6; Length 261;
Best Local Similarity 98.9%; Pred. No. 1.8e-111;
Matches 259; Conservative 1; Mismatches 1; Indels 1; Gaps 1;

Qy 158 DTEDEDEDQVDPRLIDGKTRRGDSPPQVVLDSKKKLACGAVLIHPSWVLTAAHCWDESK 217
Db 1 DTEDEDEDQVDPRLIDGKTRRGDSPPQVVLDSKKKLACGAVLIHPSWVLTAAHCWDESK 59
Qy 218 KLVRLGEYDLRRMEKELDLIDKEVFNHVNYSKSTINDIALHLAQPATLSQTIIVPIC 277
Db 60 KLVRLGEYDLRRMEKELDLIDKEVFNHVNYSKSTINDIALHLAQPATLSQTIIVPIC 119
Qy 278 LPDSGLARELNQAQGETLVYGMGYHSSREKAKRRTFVNLFIKIPVPHNECSEVMSN 337
Db 120 LPDSGLARELNQAQGETLVYGMGYHSSREKAKRRTFVNLFIKIPVPHNECSEVMSN 179
Qy 338 MVSNNMLCAGILGDRQDACEGDSGSPVVASFHGTWFLVGLVSWGCGGLHNYGYTTKVS 397
Db 180 MVSNNMLCAGILGDRQDACEGDSGSPVVASFHGTWFLVGLVSWGCGGLHNYGYTTKVS 239
Qy 398 RYLDWIGHIRDRKEAPKXSWAP 419
Db 240 RYLDWIGHIRDRKEAPKXSWAP 261

RESULT 28
5270178-20
Patent No. 5270178
APPLICANT: GERLITZ, BRUCE E.; GRINNELL, BRIAN W.
TITLE OF INVENTION: VECTORS AND COMPOUNDS FOR EXPRESSION OF
ZYMOGEN FORMS OF HUMAN PROTEIN C
NUMBER OF SEQUENCES: 21
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/07/484,133
FILING DATE: 23-FEB-1990
SEQ ID NO:20
LENGTH: 261

Query Match 59.6%; Score 1384.5; DB 6; Length 261;
Best Local Similarity 98.5%; Pred. No. 1.1e-110;
Matches 258; Conservative 1; Mismatches 2; Indels 1; Gaps 1;

Qy 158 DTEDEDEDQVDPRLIDGKTRRGDSPPQVVLDSKKKLACGAVLIHPSWVLTAAHCWDESK 217

Db 1 DTEDEDEDQVDPRLIDGKTRRGDSPPQVVLDSKKKLACGAVLIHPSWVLTAAHCWDESK 59
Qy 218 KLVRLGEYDLRRMEKELDLIDKEVFNHVNYSKSTINDIALHLAQPATLSQTIIVPIC 277
Db 60 KLVRLGEYDLRRMEKELDLIDKEVFNHVNYSKSTINDIALHLAQPATLSQTIIVPIC 119
Qy 278 LPDSGLARELNQAQGETLVYGMGYHSSREKAKRRTFVNLFIKIPVPHNECSEVMSN 337
Db 120 LPDSGLARELNQAQGETLVYGMGYHSSREKAKRRTFVNLFIKIPVPHNECSEVMSN 179
Qy 338 MVSNNMLCAGILGDRQDACEGDSGSPVVASFHGTWFLVGLVSWGCGGLHNYGYTTKVS 397
Db 180 MVSNNMLCAGILGDRQDACEGDSGSPVVASFHGTWFLVGLVSWGCGGLHNYGYTTKVS 239
Qy 398 RYLDWIGHIRDRKEAPKXSWAP 419
Db 240 RYLDWIGHIRDRKEAPKXSWAP 261

RESULT 29
US-08-944-483-51
Sequence 51, Application US/08944483
Patent No. 6232456
GENERAL INFORMATION:
APPLICANT: COHEN, MAURICE
APPLICANT: COLPITTS, TRACEY L.
APPLICANT: FRIEDMAN, PAULA N.
APPLICANT: GRANADOS, EDWARD N.
APPLICANT: KLAAS, MICHAEL R.
APPLICANT: RUSSELL, JOHN C.
APPLICANT: STEWART, KENT D.
APPLICANT: STROUPE, STEVEN D.
TITLE OF INVENTION: NOVEL SERINE PROTEASE REAGENTS
TITLE OF INVENTION: AND METHODS USEFUL FOR DETECTING AND TREATING DISEASES
NUMBER OF SEQUENCES: 76
CORRESPONDENCE ADDRESS:
ADDRESSEE: Abbott Laboratories
STREET: 100 Abbott Park Road
CITY: Abbott Park
STATE: IL
COUNTRY: USA
ZIP: 60064-3500
COMPUTER READABLE FORM:
MEDIUM TYPE: Diskette
COMPUTER: IBM Compatible
OPERATING SYSTEM: DOS
SOFTWARE: FastSeq for Windows Version 2.0
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/944,483
FILING DATE:
CLASSIFICATION: 424
PRIOR APPLICATION DATA:
APPLICATION NUMBER:
FILING DATE:
ATTORNEY/AGENT INFORMATION:
NAME: Becker, Cheryl L.
REGISTRATION NUMBER: 35,441
REFERENCE/DOCKET NUMBER: 6183-US-01
TELECOMMUNICATION INFORMATION:
TELEPHONE: 847/935-1729
TELEFAX: 847/938-2623
TELEX:
INFORMATION FOR SEQ ID NO: 51:
SEQUENCE CHARACTERISTICS:
LENGTH: 250 amino acids
TYPE: amino acid
STRANDNESS: single
TOPOLOGY: linear
MOLECULE TYPE: No. 6232456e
US-08-944-483-51


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; STRANDEDNESS:
; TOPOLOGY: linear
; MOLECULE TYPE: protein
US-08-469-486-53

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Query Match	34.8%;	Score 809.5;	DB 1;	Length 487;
Best Local Similarity	36.8%;	Pred. No. 3.4e-61;		
Matches 122;	Conservative	72;	Mismatches 150;	Indels 73;
				Gaps 13

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0Y 1 ANSLBETLHSSLEBCEIEECIOPFEAEIIFONVDITLAFMSKHVDGQOCLVPLEHCA 60
Db 41 ANSLBETVNGULRECELEBACSLBNAEIVEDEMQTDIFMSKYDQDQ---EGHCL 96
0Y 61 SLCCGHCITDIGISFSCDRSGMBGRPCQ---REVSFLNCSLMDGCTHYCLAEVGMRR 117
Db 97 N---QGHCKDIDIGIYTCABEFGKCNCEPSTREI---CSLDNGGDDQFCREERSVR 148
0Y 118 CSCAPYKUGDDLLQCHPAKFPCCR-FMKMKKXSHLKRTED-QEQUVD-----168
Db 149 CSCAGHGVLDGDSKSCVSTERFPGCFPTQGRSRMAIHTSEDAIASELHXYDADISPT 208
0Y 169 -----RLIDGKXTRKGRGSPNQVILDSKKKILACGAVILHPS 204
Db 209 ESDLDLGNTRTEPAGBDSQVVRIVGSRPCARGBCPPQALVAVENBFCOGITLNEF 268
0Y 205 WYTLAAHCDESKULVLVGEYDLRMKEMELDILIKFVPHVYSSTDDNDIALHLA 264
Db 265 YVTLAAHCLOMKRFTYAVDBRNTDEBENBNABREVMKSRFVETDPEIVALPLX 328
0Y 265 QPATLSGTIVPICLDPSGLARELNOAGET-LVITGWHGSHSREKEMRRRFPVIANFXI 322
Db 322 TPPIFRGNVAPACLEKKNMAYTL-MTKGIGIYSVG-----RHEKXGLASTLKTAEV 381
0Y 324 PVTZHNCESEVSNVSNVSENNLCAGLIGRQDACEGDSGPMVASPHGTNPLVGLVSNBG 383
Db 382 PVDYRSCTKLSSFTITDNNFCAGYDQEDACQDGSQDGHGHTREKDYFVTVGISNGB 441
0Y 384 CGLLHNGYVTKYSXYLNT-----HGHRDKKAPQKSM 417
Db 442 CARNGKGVYTKVSNFLWMDIKIMKARACAGSSGSH---SEAP-ATW 484

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RESULT 33
 US-08-469-658-53
 Sequence 53, Application US/08469658
 Patent No. 5917018
 GENERAL INFORMATION:
 APPLICANT: Th egersten, Hans Christian
 APPLICANT: Holtey, Thor Las
 APPLICANT: Elzerodt, Michael
 TITLE OF INVENTION: IMPROVED METHOD FOR THE REPODING OF
 TITLE OF INVENTION: PROTEINS
 NUMBER OF SEQUENCES: 58
 CORRESPONDENCE ADDRESS:
 ADDRESSEE: Fish & Richardson P.C.
 STREET: 225 Franklin Street
 CITY: Boston
 STATE: Massachusetts
 COUNTRY: USA
 ZIP: 02110-2804
 COMPUTER READABLE FORM:
 MEDIUM TYPE: Floppy disk
 COMPUTER: IBM PC Compatible
 OPERATING SYSTEM: PC-DOS/MS-DOS
 SOFTWARE: PatentIn Release #1.0, Version
 SOFTWARE: #1.25
 CURRENT APPLICATION DATA:
 APPLICATION NUMBER: US/08/469,658
 FILING DATE: June 5, 1995
 CLASSIFICATION: 530
 PRIOR APPLICATION DATA:
 APPLICATION NUMBER: 08/192,060
 FILING DATE: February 4, 1994

```

1 CLASSIFICATION: 530
2
3 ATTORNEY/AGENT INFORMATION:
4
5 NAME: Paul T. Clark
6
7 REGISTRATION NUMBER: 30,162
8
9 REFERENCE/DOCKET NUMBER: 06563/002007
10
11 TELECOMMUNICATION INFORMATION:
12
13 TELEPHONE: 617 542 5070
14
15 TELEFAX: 617 542 8906
16
17 TELEX: 200154
18
19 INFORMATION FOR SEQ ID NO: 53:
20
21 SEQUENCE CHARACTERISTICS:
22
23 LENGTH: 487 amino acids
24
25 TYPE: amino acid
26
27 STRANDEDNESS:
28
29 TOPOLOGY: linear
30
31 MOLECULE TYPE: protein
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Query Match 34.8%; Score 809.5; DB 2; Length 487;
Best Local Similarity 36.8%; Pred. No. 3.4e-61;
Matches 172; Conservative 72; Mismatches 150; Indels 73; Gaps 13;

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Qy 1 ANSFLSESHSLRECEIEICDPEEALEIFONVDDTLAFSGKVVDDQCTVLPENPCA 60
Db 41 ANSFLSEYQNLRECELEBACSLSEAEAYEDAQTBEPFMSXKODQO----EGHCL 95
Qy 61 SLCCGGCTGTCIGSFSQCDRSGMGRPCO---REVSFNCSLNGGCTHYCLEBYGMR 1177
Db 97 N-----QGHCKGIDYCTTCAGFPGKKCEFSIREI---CSLNGGCGQPCRERSVR 1488
Qy 118 CSQAPGYKIGDILLQCHPAVXPCGR--PWKRMKKSHLKRTED--QEDQVDP----- 1688
Db 149 CSCSHGYVLGDSSCYSTERFPCCKFLQGRSRANAIIHSDALDASLEHNDPDLHSPT 2088
Qy 169 -----RLIDKQTRRGDSPQWVLLDSKKKIACGAVLIHPS 2048
Db 209 ESSLDLGLNRTRESAGDGSQVYRIVIGRDCAEGCPCWQMLVNEENBGFCSGTILNEF 2688
Qy 205 WYTLAAHCHMDSKKLYLRLEQYDLARKMKNBDDLDKEFVFNHYKSTDDNDMLHLA 2648
Db 269 YVTLAAHCHMCKPFTYRVDNRTSDEQGENHAEVMTVYHSHFVEIYDPLDVLATLK 3288
Qy 265 QPALTISQTVPCIPDSGLAERELNQAOEY-LVTVMGYSHSREKAEKRETFVNLFXI 3228
Db 329 TPTRFRNNAAPRCPEQDMAEYL--MQTKGIYSRG-----RTHKGRSLSTLDMLFV 3888
Qy 324 FVYEHNECSYWMNMVSENNLCAGLIGRQDACEGDSGGSPVYASFTGHTWLVGLVSMGEG 3838
Db 382 PYVDRTSTCKLSSFTIIPNNFCAGYDTPEDACQSGGSPHTFPCQTYFVYGVISMGBG 4448
Qy 384 CGLHHNYGYTMSRYDNL-----HGHIIRXKAPKSN 4178
Db 442 CARRGRGVYIKNSFKMLDKIMKARAGAAAGSRGH--SEALP-ATW 4848

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RESULT 34
 US-08-469-486-2
 : Sequence 2, Application US/08469486
 : Patent No. 5739281
 :
 : GENERAL INFORMATION:
 :
 : APPLICANT: Thøgersen, Hans Christian
 :
 : APPLICANT: Holte, Thor Ias
 :
 : APPLICANT: Etzold, Michael
 :
 : TITLE OF INVENTION: Improved method for the refolding of
 :
 : TITLE OF INVENTION: proteins
 :
 : NUMBER OF SEQUENCES: 58
 :
 : CORRESPONDENCE ADDRESS:
 :
 : ADDRESSEE: Fish & Richardson
 :
 : STREET: 225 Franklin Street
 :
 : CITY: Boston
 :
 : STATE: Massachusetts
 :
 : COUNTRY: USA
 :
 : ZIP: 02110-2804

COMPUTER READABLE FORM:

MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patent Release #1.0, Version
SOFTWARE: #1.25

CURRENT APPLICATION DATA:

APPLICATION NUMBER: US/08/469,486

FILING DATE:

CLASSIFICATION: 530

PRIOR APPLICATION DATA:

APPLICATION NUMBER: 08/192,060

FILING DATE: February 4, 1994

ATTORNEY/AGENT INFORMATION:

NAME: Paul T. Clark

REGISTRATION NUMBER: 30,162

REFERENCE/DOCKET INFORMATION: 06363/002001

TELEPHONE: 617 542 5070

TELEFAX: 617 542 8906

TELEX: 200154

INFORMATION FOR SEQ ID NO: 2:

SEQUENCE CHARACTERISTICS:

LENGTH: 492 amino acids

TYPE: amino acid

STRANDEDNESS:

TOPOLOGY: linear

MOLECULE TYPE: protein

US-08-469-486-2

Query Match 34.8%; Score 809.5; DB 1; Length 492;
Best Local Similarity 36.8%; Pred. No. 3.5e-61;
Matches 172; Conservative 72; Mismatches 150; Indels 73; Gaps 13;

```
QY 1 ANSFLELHSSLRERCEIEICDPEBAKEIFONVDTLAFMSKHTDQCLVPLERPCA 60
DB 41 ANSFLEHVKQNLRECELEACSLERAREVEDBQTFDEFSKYKQDQC---EGHPCL 96
QY 61 SLCCGHGTICDGGFSFGDCSGMEGRFCQ--REVSLNCSLNDGCTHYCLEEVGMR 117
DB 97 N---QGHCKDGIQYTCCTCAGFBGKNCBETREI---CSLDNGGDDQCFREBSERV 148
QY 118 CSAGPYKLDLLOCHPAVFPQGR-PKMEKKRSHLRDTE--QEDQVP----- 168
DB 149 CSAGHYGLDSDSKSCVSTERFPCGKFTQGRSRWALHTSEDLASLEHYDPADLSPT 208
QY 169 -----RLIDGKMTREGDSPNQVYLLDSKKLACGAVLIHPS 204
DB 209 ESSLDLGLNRTPEPAGEDSQYRIVGGRDCAEGECPCWALLVNEBEGCGGTILNEF 268
QY 205 WLTAAHCHDESKLVLRLGEYDLRRMEKWEILDIDKEVHPNTSKSTTNDIALHLA 264
DB 269 YVLTAAHCHQAKRFTYVAGDRNTEQEGNEMAHVEVMTKSRFKETYPFDIIVLRK 328
QY 265 QPATLSQITVPICLDPSGLAERELNAGQET-LYTGWGHSSREKAKRNTFYVLFITK 323
DB 329 TPFRFRNVAAPCLPEKDMAEATL--MTQKGTIVSGFG-----RHEKGRSLSTLKLAEV 381
QY 324 PVPVHNECSRWNSWNSMNLCAGLIGDRDACEGSGGPMVASPHGTWPLVGLVSGEG 383
DB 382 PYVDRSTCKLSSFFITIPNFCAGYDTQPEDAACGDSGGHHTPKDITYFTGIVSGEG 441
QY 384 CGLLHNYGYTKVSKRYLDNI-----HGHTRDXEAPQKSW 417
DB 442 CARKGEGYTKVSNFLKMTDKIMKARAGAGASRGH---SEAP-ATW 484
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RESULT 35

US-08-469-658-2

Sequence 2, Application US/08469658

Patent No. 5917018

GENERAL INFORMATION:

APPLICANT: Th egeresen, Hans Christian

APPLICANT: Holte, Thor Las
APPLICANT: Etzerodt, Michael
TITLE OF INVENTION: IMPROVED METHOD FOR THE REFOILING OF
TITLE OF INVENTION: PROTEINS

NUMBER OF SEQUENCES: 58

CORRESPONDENCE ADDRESS:

ADDRESSEE: Fish & Richardson P.C.

STREET: 225 Franklin Street

CITY: Boston

STATE: Massachusetts

COUNTRY: USA

ZIP: 02110-2804

COMPUTER READABLE FORM:

MEDIUM TYPE: Floppy disk

COMPUTER: IBM PC compatible

OPERATING SYSTEM: PC-DOS/MS-DOS

SOFTWARE: Patent Release #1.0, Version

SOFTWARE: #1.25

CURRENT APPLICATION DATA:

APPLICATION NUMBER: US/08/469,658

FILING DATE: June 5, 1995

CLASSIFICATION: 530

PRIOR APPLICATION DATA:

APPLICATION NUMBER: 08/192,060

FILING DATE: February 4, 1994

CLASSIFICATION: 530

ATTORNEY/AGENT INFORMATION:

NAME: Paul T. Clark

REGISTRATION NUMBER: 30,162

REFERENCE/DOCKET NUMBER: 06363/002002

TELECOMMUNICATION INFORMATION:

TELEPHONE: 617 542 5070

TELEFAX: 617 542 8906

TELEX: 200154

INFORMATION FOR SEQ ID NO: 2:

SEQUENCE CHARACTERISTICS:

LENGTH: 492 amino acids

TYPE: amino acid

STRANDEDNESS:

TOPOLOGY: linear

MOLECULE TYPE: protein

US-08-469-658-2

Query Match 34.8%; Score 809.5; DB 2; Length 492;
Best Local Similarity 36.8%; Pred. No. 3.5e-61;
Matches 172; Conservative 72; Mismatches 150; Indels 73; Gaps 13;

```
QY 1 ANSFLELHSSLRERCEIEICDPEBAKEIFONVDTLAFMSKHTDQCLVPLERPCA 60
DB 41 ANSFLEHVKQNLRECELEACSLERAREVEDBQTFDEFSKYKQDQC---EGHPCL 96
QY 61 SLCCGHGTICDGGFSFGDCSGMEGRFCQ--REVSLNCSLNDGCTHYCLEEVGMR 117
DB 97 N---QGHCKDGIQYTCCTCAGFBGKNCBETREI---CSLDNGGDDQCFREBSERV 148
QY 118 CSAGPYKLDLLOCHPAVFPQGR-PKMEKKRSHLRDTE--QEDQVP----- 168
DB 149 CSAGHYGLDSDSKSCVSTERFPCGKFTQGRSRWALHTSEDLASLEHYDPADLSPT 208
QY 169 -----RLIDGKMTREGDSPNQVYLLDSKKLACGAVLIHPS 204
DB 209 ESSLDLGLNRTPEPAGEDSQYRIVGGRDCAEGECPCWALLVNEBEGCGGTILNEF 268
QY 205 WLTAAHCHDESKLVLRLGEYDLRRMEKWEILDIDKEVHPNTSKSTTNDIALHLA 264
DB 269 YVLTAAHCHQAKRFTYVAGDRNTEQEGNEMAHVEVMTKSRFKETYPFDIIVLRK 328
QY 265 QPATLSQITVPICLDPSGLAERELNAGQET-LYTGWGHSSREKAKRNTFYVLFITK 323
DB 329 TPFRFRNVAAPCLPEKDMAEATL--MTQKGTIVSGFG-----RHEKGRSLSTLKLAEV 381
QY 324 PVPVHNECSRWNSWNSMNLCAGLIGDRDACEGSGGPMVASPHGTWPLVGLVSGEG 383
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Db 382 PYVDNSCKLSSSFTITPMFCAGYDTPQEDACQSDSGPHTVTKDTYFVTGIVSMGEG 441
QY 384 CGLHNYGVYTKVSRYLDMT-----HGHIKDKEAPQKSM 417
Db 442 CARXKGFVYTKVSNFLKWDIKIMKARAGASRGH---SRAP-ATW 484

RESULT 36
PCT-US92-10068-1
Sequence 1, Application PC/TUS9210068
GENERAL INFORMATION:
APPLICANT: Attieri, Dario C
APPLICANT: Edgington, Thomas S
TITLE OF INVENTION: Factor X-Derived Polypeptides and
TITLE OF INVENTION: Anti-Peptide Antibodies, Systems and Therapeutic Methods
NUMBER OF SEQUENCES: 19
CORRESPONDENCE ADDRESS:
ADDRESSEE: Office of Patent Counsel, The Scripps
ADDRESSEE: Research Institute
STREET: 10666 North Torrey Pines Road
CITY: La Jolla
STATE: CA
COUNTRY: USA
ZIP: 92037
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: PCT/US92/10068
FILING DATE: 19921120
CLASSIFICATION:
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 07/798,221
FILING DATE: 22-NOV-1991
ATTORNEY/AGENT INFORMATION:
NAME: Fitting, Thomas
REGISTRATION NUMBER: SCR1221P
REFERENCE/DOCKET NUMBER: 34,163
TELECOMMUNICATION INFORMATION:
TELEPHONE: 619-554-2937
TELEFAX: 619-554-6312
INFORMATION FOR SEQ ID NO: 1:
SEQUENCE CHARACTERISTICS:
LENGTH: 448 amino acids
TYPE: AMINO ACID
TOPOLOGY: linear
NOBROUTE TYPE: protein
HYPOTHEICAL: NO
FEATURE:
NAME/KEY: Region
LOCATION: 1..139
OTHER INFORMATION: /note="Factor X light Chain"
FEATURE:
NAME/KEY: Region
LOCATION: 140..142
OTHER INFORMATION: /note="Factor X Connecting
peptide"
FEATURE:
NAME/KEY: Region
LOCATION: 143..448
OTHER INFORMATION: /note="Factor X Heavy Chain"
PCT-US92-10068-1

Query Match 34.8%; Score 809; DB 5; Length 448;
Best Local Similarity 35.7%; Pred. No. 3,4e-61;
Matches 163; Conservative 87; Mismatches 151; Indels 56; Gaps 9;

QY 1 ANSFLBRLHSLRECEIEICDFEAKIIFQNVDTLAFWSHVDGQCLVLFHPQA 60

Db 1 ANSFLBRLHSLRECEIEICDFEAKIIFQNVDTLAFWSHVDGQCLVLFHPQA 54
QY 61 SLCCGHCITDIGISFCDRCSGMEGRPCQREVSPLNCSJMGCTHYCLEEYGNRCSG 120
Db 55 --CONQKCKDGLGEYCTCTLEGPEGNKCELFRLK--CSLDMDGDQDPCHEQNSVYVSC 111
QY 121 AFGYLDGDDLLQCHPAKPCQGRPMKKEKRSKRLKRDTEQD-----QVD 167
Db 112 ARGYTLADNGACILPGPPGCK--QTLERRKGSVAQATSSSGEPAPDSITWKPYDAAD 169
QY 168 P-----RLDGKMTGRGSPQVVLDSKKKLACAGVLIHS 204
Db 170 PIENPEDDLDPNCPQPERGNNLTIVGQPCQDSCCPQALINERBGFCCGTLTBSF 229
QY 205 WTLTAHQMSCKLVLVRGEYDLARMKEBLDIDKEVFVPMYSKSTNDIALHLTA 264
Db 230 YLTAHQCLYQAKRFKVRVGDRTQEGGEAVHEVEVYIKNNFTGETYDPILATRLK 289
QY 265 QPRTLSQTVIPICLPDSGLARELNQAGQT-LVTGMYHSSREKAKNRFTVNLFIKI 323
Db 290 TPTFRMNVADACLPERDWAESTL--MTQTKGIVSGFGHTHKRQSTR-----LTMLEV 342
QY 324 PVPFNECSFVMSNMVSENMLCAGILADPDQACQSDSGPMTVAFHGTWFLVGLVSMGEG 383
Db 343 PYVDNSCKLSSSFTITPMFCAGYDTPQEDACQSDSGPHTVTKDTYFVTGIVSMGEG 402
QY 384 CGLHNYGVYTKVSRYLDMTHTGHIKDKEAPQ-KSMAP 419
Db 403 CARXKGFVYTKVSNFLKWDIKIMKARAGASRGH---SRAP-ATW 484

RESULT 37
US-08-295-411-3
Sequence 3, Application US/08295411
GENERAL INFORMATION:
APPLICANT: Griffin, John H.
APPLICANT: Masters, Rolf M.
TITLE OF INVENTION: Serine Protease-Derived Polypeptides and
TITLE OF INVENTION: Anti-Peptide Antibodies, Systems and Therapeutic Methods
NUMBER OF SEQUENCES: 10
CORRESPONDENCE ADDRESS:
ADDRESSEE: Office of Patent Counsel, The Scripps
ADDRESSEE: Research Institute
STREET: 10666 No. 567939th Torrey Pines Road, TPC 8
CITY: La Jolla
STATE: CA
COUNTRY: USA
ZIP: 92037
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/295,411
FILING DATE: 22-AUG-1994
CLASSIFICATION: 530
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 07/793,989
FILING DATE: 18-NOV-1991
CLASSIFICATION: 530
ATTORNEY/AGENT INFORMATION:
NAME: Fitting, Thomas
REGISTRATION NUMBER: 34,163
REFERENCE/DOCKET NUMBER: TSN1263,0CI
TELECOMMUNICATION INFORMATION:
TELEPHONE: 619-554-2937
TELEFAX: 619-554-6312
INFORMATION FOR SEQ ID NO: 3:
SEQUENCE CHARACTERISTICS:

LENGTH: 448 amino acids
TYPE: amino acid
TOPOLOGY: linear
MOLECULE TYPE: protein
HYPOTHEICAL: NO
ANTI-SENSE: NO
FEATURE:
NAME/KEY: Region
LOCATION: 1..139
OTHER INFORMATION: /note= "Factor X light Chain"
FEATURE:
NAME/KEY: Region
LOCATION: 140..142
OTHER INFORMATION: /note= "Factor X Connecting
OTHER INFORMATION: Tripeptide"
NAME/KEY: Region
LOCATION: 143..448
OTHER INFORMATION: /note= "Factor X Heavy Chain"
US-08-295-411-3

Query Match 34.7%; Score 807; DB 1; Length 448;
Best Local Similarity 35.4%; Pred. No. 5, 1e-61;
Matches 162; Conservative 88; Mismatches 151; Indels 56; Gaps 9;

QY 1 ANSLFELHSHSLERECIEECDFEAKKIFQNVDDTLAFWSKGVYDQCLVLEHPCA 60
1 ANSLFELHSHSLERECIEECDFEAKKIFQNVDDTLAFWSKGVYDQCLVLEHPCA 60
DB 1 ANSLFELHSHSLERECIEECDFEAKKIFQNVDDTLAFWSKGVYDQCLVLEHPCA 60
QY 61 SLCCGHTCIDIGSFSCDSGMEGRFCQREVSFLNCSIDNGCTHYCLEVGMRCSC 120
61 SLCCGHTCIDIGSFSCDSGMEGRFCQREVSFLNCSIDNGCTHYCLEVGMRCSC 120
DB 55 --CQNGKCKBGLGEYCTCLGEGEGKNCLEFTRKLCSDIDNGDQCFHEQNSVVCSC 111
55 --CQNGKCKBGLGEYCTCLGEGEGKNCLEFTRKLCSDIDNGDQCFHEQNSVVCSC 111
QY 121 APGYKLDGDLQCHAVYFPCGRPMKMKKSHLKDTEDED-----QVD 167
121 APGYKLDGDLQCHAVYFPCGRPMKMKKSHLKDTEDED-----QVD 167
DB 112 ARGTTLDNGKACITPGYPCGK--QTLERRKSVYAQATSSGEADSTWKPYDAAD 169
112 ARGTTLDNGKACITPGYPCGK--QTLERRKSVYAQATSSGEADSTWKPYDAAD 169
QY 168 P-----RLIDKMTRRGDSPMQVLLDSKKKLAGAVLIHPS 204
168 P-----RLIDKMTRRGDSPMQVLLDSKKKLAGAVLIHPS 204
DB 170 PTEPPDLDFNQTPQERGDNNLTRIVGGQCKDCECPWQALLINENHGGCGTILISF 229
170 PTEPPDLDFNQTPQERGDNNLTRIVGGQCKDCECPWQALLINENHGGCGTILISF 229
QY 205 WYLTAAHCWDESKKLLVRLGSDYLRKEMWELDIEVYVHPNYSKSTTNDIALIHLA 264
205 WYLTAAHCWDESKKLLVRLGSDYLRKEMWELDIEVYVHPNYSKSTTNDIALIHLA 264
DB 230 YLTAAHCYQAKRKRVAVGDRNTEDEEGEAVHVEVVIKRRFTKTYDFDAVLRK 289
230 YLTAAHCYQAKRKRVAVGDRNTEDEEGEAVHVEVVIKRRFTKTYDFDAVLRK 289
QY 265 QPATLSQTIPICLPDGSLARELNQAGET-LVYGMGYSHSEKAKRNTFYANFIKI 323
265 QPATLSQTIPICLPDGSLARELNQAGET-LVYGMGYSHSEKAKRNTFYANFIKI 323
DB 290 TPTFRMNVNAPACLPEDNMAESTL--MTQKIGVSGGRKHEKQSTR-----LQMLEV 342
290 TPTFRMNVNAPACLPEDNMAESTL--MTQKIGVSGGRKHEKQSTR-----LQMLEV 342
QY 324 PVPVHNECEVMSNMVSNENLCAGLIGDRQDACEGDSGPMVAFHGTWPLVGLVSGEG 383
324 PVPVHNECEVMSNMVSNENLCAGLIGDRQDACEGDSGPMVAFHGTWPLVGLVSGEG 383
DB 343 PYVDNSCKLSSSFLITQNNFCAGYDTKQEDACQDSGSGPHVTRFKDTYFVTVGIVSGEG 402
343 PYVDNSCKLSSSFLITQNNFCAGYDTKQEDACQDSGSGPHVTRFKDTYFVTVGIVSGEG 402
QY 384 CGLLHNVGYTKVSKYLDWTHGIRKEMPO-KSNAP 419
384 CGLLHNVGYTKVSKYLDWTHGIRKEMPO-KSNAP 419
DB 403 CARCKKGLYVTFALWIDRSMKTRGLPRAKSHAP 439
403 CARCKKGLYVTFALWIDRSMKTRGLPRAKSHAP 439

RESULT 38

US-955-471-3
Sequence 3, Application US/08955471
Patent No. 5968751
GENERAL INFORMATION:
APPLICANT: Griffin, John H.
APPLICANT: Meesters, Rolf M.
TITLE OF INVENTION: Serine Protease-Derived Polypeptides and
TITLE OF INVENTION: Anti-Peptide Antibodies, Systems and Therapeutic Methods
TITLE OF INVENTION: For Inhibiting Coagulation
NUMBER OF SEQUENCES: 10
CORRESPONDENCE ADDRESS:
ADDRESS: Office of Patent Counsel, The Scripps
ADDRESS: Research Institute
STREET: 10666 No. 5968751th Torrey Pines Road, TPC 8

CITY: La Jolla
STATE: CA
COUNTRY: USA
ZIP: 92037
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patent Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/955,471
FILING DATE:
CLASSIFICATION:
PRIORITY APPLICATION DATA:
APPLICATION NUMBER: 08/295,411
FILING DATE:
CLASSIFICATION:
ATTORNEY/AGENT INFORMATION:
NAME: Fitting, Thomas
REGISTRATION NUMBER: 34,163
REFERENCE/DOCKET NUMBER: TSI2163.0C1
TELECOMMUNICATION INFORMATION:
TELEPHONE: 619-554-2937
TELEFAX: 619-554-6312
INFORMATION FOR SEQ ID NO: 3:
SEQUENCE CHARACTERISTICS:
LENGTH: 448 amino acids
TYPE: amino acid
TOPOLOGY: linear
MOLECULE TYPE: protein
HYPOTHEICAL: NO
ANTI-SENSE: NO
FEATURE:
NAME/KEY: Region
LOCATION: 1..139
OTHER INFORMATION: /note= "Factor X light Chain"
FEATURE:
NAME/KEY: Region
LOCATION: 140..142
OTHER INFORMATION: /note= "Factor X Connecting
OTHER INFORMATION: Tripeptide"
NAME/KEY: Region
LOCATION: 143..448
OTHER INFORMATION: /note= "Factor X Heavy Chain"
US-08-955-471-3

Query Match 34.7%; Score 807; DB 2; Length 448;
Best Local Similarity 35.4%; Pred. No. 5, 1e-61;
Matches 162; Conservative 88; Mismatches 151; Indels 56; Gaps 9;

QY 1 ANSLFELHSHSLERECIEECDFEAKKIFQNVDDTLAFWSKGVYDQCLVLEHPCA 60
1 ANSLFELHSHSLERECIEECDFEAKKIFQNVDDTLAFWSKGVYDQCLVLEHPCA 60
DB 1 ANSLFELHSHSLERECIEECDFEAKKIFQNVDDTLAFWSKGVYDQCLVLEHPCA 60
QY 61 SLCCGHTCIDIGSFSCDSGMEGRFCQREVSFLNCSIDNGCTHYCLEVGMRCSC 120
61 SLCCGHTCIDIGSFSCDSGMEGRFCQREVSFLNCSIDNGCTHYCLEVGMRCSC 120
DB 55 --CQNGKCKBGLGEYCTCLGEGEGKNCLEFTRKLCSDIDNGDQCFHEQNSVVCSC 111
55 --CQNGKCKBGLGEYCTCLGEGEGKNCLEFTRKLCSDIDNGDQCFHEQNSVVCSC 111
QY 121 APGYKLDGDLQCHAVYFPCGRPMKMKKSHLKDTEDED-----QVD 167
121 APGYKLDGDLQCHAVYFPCGRPMKMKKSHLKDTEDED-----QVD 167
DB 112 ARGTTLDNGKACITPGYPCGK--QTLERRKSVYAQATSSGEADSTWKPYDAAD 169
112 ARGTTLDNGKACITPGYPCGK--QTLERRKSVYAQATSSGEADSTWKPYDAAD 169
QY 168 P-----RLIDKMTRRGDSPMQVLLDSKKKLAGAVLIHPS 204
168 P-----RLIDKMTRRGDSPMQVLLDSKKKLAGAVLIHPS 204
DB 170 PTEPPDLDFNQTPQERGDNNLTRIVGGQCKDCECPWQALLINENHGGCGTILISF 229
170 PTEPPDLDFNQTPQERGDNNLTRIVGGQCKDCECPWQALLINENHGGCGTILISF 229
QY 205 WYLTAAHCWDESKKLLVRLGSDYLRKEMWELDIEVYVHPNYSKSTTNDIALIHLA 264
205 WYLTAAHCWDESKKLLVRLGSDYLRKEMWELDIEVYVHPNYSKSTTNDIALIHLA 264
DB 230 YLTAAHCYQAKRKRVAVGDRNTEDEEGEAVHVEVVIKRRFTKTYDFDAVLRK 289
230 YLTAAHCYQAKRKRVAVGDRNTEDEEGEAVHVEVVIKRRFTKTYDFDAVLRK 289
QY 265 QPATLSQTIPICLPDGSLARELNQAGET-LVYGMGYSHSEKAKRNTFYANFIKI 323
265 QPATLSQTIPICLPDGSLARELNQAGET-LVYGMGYSHSEKAKRNTFYANFIKI 323

Db 290 TPITFRNNVAPACLEPRDMESTL--MTQKTIYSGFGRTHEKRGQSTR-----LKMLEY 342

QY 324 PVVPHNECSEWMSNVSNNMLCAGILGRDACAEGDSGSPWVASFHGTWFLVGLVSGEG 383

Db 343 PYVDRNSCKLSSFFITQMFCAQYDTKQEDACQDSGSEPHVTREKDTYFTVGLVSGEG 402

QY 384 CGLHNTGVYTKVSRYLDMHGHIRDKRAPQ-KSNAP 419

Db 403 CARXKGYIYTKVTAFLKMDRSMKTRGLPKAKSHAP 439

RESULT 39

PCT-US92-10242-3

Sequence 3, Application PC/TUS9210242

GENERAL INFORMATION:

APPLICANT: Griffin, John H.

APPLICANT: Meesters, Rolf

TITLE OF INVENTION: Serine Protease-Derived Polypeptides and

TITLE OF INVENTION: Anti-Peptide Antibodies, Systems and Therapeutic Methods

NUMBER OF SEQUENCES: 10

CORRESPONDENCE ADDRESS:

ADDRESSEE: Office of Patent Counsel, The Scripps

ADDRESSEE: Research Institute

STREET: 10666 North Torrey Pines Road, TPC 8

CITY: La Jolla

STATE: CA

COUNTRY: USA

ZIP: 92037

COMPUTER READABLE FORM:

MEDIUM TYPE: Floppy disk

COMPUTER: IBM PC compatible

OPERATING SYSTEM: PC-DOS/MS-DOS

SOFTWARE: Patent Release #1.0, Version #1.25

CURRENT APPLICATION DATA:

APPLICATION NUMBER: PCT/US92/10242

FILING DATE: 19921118

CLASSIFICATION:

PRIOR APPLICATION DATA:

APPLICATION NUMBER: US 07/793,989

FILING DATE: 18-NOV-1991

ATTORNEY/AGENT INFORMATION:

NAME: Fitting, Thomas

REGISTRATION NUMBER: 34,163

TELEPHONE: 619-554-2937

TELEFAX: 619-554-6312

INFORMATION FOR SEQ ID NO: 3:

SEQUENCE CHARACTERISTICS:

LENGTH: 448 amino acids

TYPE: AMINO ACID

TOPOLOGY: linear

MOLECULE TYPE: protein

HYPOTHEICAL: NO

ANTI-SENSE: NO

FEATURE:

NAME/KEY: Region

LOCATION: 1..139

OTHER INFORMATION: /note= "Factor X light Chain"

FEATURE:

NAME/KEY: Region

LOCATION: 140..142

OTHER INFORMATION: /note= "Factor X Connecting

OTHER INFORMATION: Tripeptide"

NAME/KEY: Region

LOCATION: 143..448

OTHER INFORMATION: /note= "Factor X Heavy Chain"

PCT-US92-10242-3

Query Match

Best Local Similarity 34.7%; Score 807, DB 5; Length 448;

Best Local Similarity 35.4%; Pred. No. 5.1e-61;

Matches 162; Conservative 88; Mismatches 151; Indels 56; Gaps 9;

QY 1 ANSPFEEIRSSRECIREEIODEPAKEIFQWVDLTALFMSKHVQDOCVLPLEHCA 60

Db 1 ANSPFEEIRSSRECIREEIODEPAKEIFQWVDLTALFMSKHVQDOCVLPLEHCA 60

QY 61 SLCCGHGCTIDGIGSPSCDSCGNEGRFCQREVSFLNSLNGGCTHYCLFEVGRRCSC 120

Db 55 --CQNGKCKGAGYEYTCLEGGEGKNCGLFTRKI--CSLNGCCDQFCHRGNSVVCSC 111

QY 121 APQYKLGDDLIQHPVAFPCGRPMKMKRSHLKRDEDED-----QVD 167

Db 112 ARGYTADNGKACIPTGYPCKG--QTERRRKRSVAQATSSSGEAPDSITWKYDAALD 169

QY 168 P-----RLDGMTRRSGSPMVQVILDSKKLAGAVLIHPS 204

Db 170 PTENPFLLDPNQTQREGDNNLTIVGQECQSCQPMQALINENBFCGCTILSEF 229

QY 205 WYLAHAGCMBESKLLVRLGEYDLRNEKWEMLDIKEVHPVNSKSTDDIALHLA 264

Db 230 YILTAHGLYQAKRFVVRVGDNTEQEGGAHVEVVIKNNFTKETVDPDLAVRLX 289

QY 265 QPATTSGTIVPCLDPSGLAEKLNQAGQET-LVTGKGHSRKEKAKNRFTVNLFIKI 323

Db 290 TPITFRNNVAPACLEPRDMESTL--MTQKTIYSGFGRTHEKRGQSTR-----LKMLEY 342

QY 324 PVVPHNECSEWMSNVSNNMLCAGILGRDACAEGDSGSPWVASFHGTWFLVGLVSGEG 383

Db 343 PYVDRNSCKLSSFFITQMFCAQYDTKQEDACQDSGSEPHVTREKDTYFTVGLVSGEG 402

QY 384 CGLHNTGVYTKVSRYLDMHGHIRDKRAPQ-KSNAP 419

Db 403 CARXKGYIYTKVTAFLKMDRSMKTRGLPKAKSHAP 439

RESULT 40

US-09-367-777-44

Sequence 44, Application US/09367777

Patent No. 6562598

GENERAL INFORMATION:

APPLICANT: Himmelbach, Michele

Fleiderer, Michael

Falkner, Falco-Guenther

Eibl, Johann

Dorner, Friedrich

Schlokat, Uwe

TITLE OF INVENTION: Factor X Deletion Mutants

and Analogues Thereof

NUMBER OF SEQUENCES: 145

CORRESPONDENCE ADDRESS:

ADDRESSEE: Townsend and Townsend and Crew LLP

STREET: Two Embarcadero Center, Eighth Floor

CITY: San Francisco

STATE: CA

COUNTRY: USA

ZIP: 94111-3834

COMPUTER READABLE FORM:

MEDIUM TYPE: Diskette

COMPUTER: IBM compatible

OPERATING SYSTEM: DOS

SOFTWARE: PatsEQ for Windows Version 2.0

CURRENT APPLICATION DATA:

APPLICATION NUMBER: US/09/367,777

FILING DATE: 10-NO. 6562598-1999

CLASSIFICATION: <Unknown>

PRIOR APPLICATION DATA:

APPLICATION NUMBER: AT A 336/97

FILING DATE: 27-FEB-1997

APPLICATION NUMBER: NO PCT/AT98/00046

FILING DATE: 27-FEB-1998

ATTORNEY/AGENT INFORMATION:

NAME: Aussenhub, Scott L.

REGISTRATION NUMBER: 42,271

REFERENCE/DOCKET NUMBER: 20695D-000900US
TELECOMMUNICATION INFORMATION:
TELEPHONE: 415-576-0200
TELEFAX: 415-576-0300
TELEX: <Unknown>
INFORMATION FOR SEQ ID NO: 44:
SEQUENCE CHARACTERISTICS:
LENGTH: 488 amino acids
TYPE: amino acid
STRANDEDNESS: single
TOPOLOGY: linear
MOLECULE TYPE: protein
SEQUENCE DESCRIPTION: SEQ ID NO: 44:
US-09-367-77-44

Query Match 34.6%; Score 803; DB 4; Length 488;
Best Local Similarity 35.4%; Pred. No. 1.2e-60;
Matches 162; Conservative 87; Mismatches 152; Indels 56; Gaps 9;
QY 1 ANSFLRLHSSLERECIEICDPEBAKEIFQVNDTLAFWSKHYDQCLVPLEHPCA 60
DB 41 ANSFLRLHSSLERECIEICDPEBAKEIFQVNDTLAFWSKHYDQCLVPLEHPCA 60
QY 61 SLCCGHTCIDIGSPSCDPSGMEGRQGVSVFLNCSLDNGGCTHYCLEVGMRCSC 120
DB 95 --CQNGKCKGDLGELYCTCLBGFEGKNCLEPTRLK-CSLDNGDQDQCHEQNSVVCSC 151
QY 121 APGYKLDLQCHPAVKPCGPRMREKRSLSKEDTEDQD-----QYD 167
DB 152 ARGYTLADNGKACIPTPGYPCGR-QTLERKRSVVAQATSSGSEAPDSITWKPYDAADID 209
QY 168 P-----RLIDGKMTRRGDSPMQVLLDSKKKLAACAVALIHPS 204
DB 210 PTENPFLDLDFNQTPERGDNNLTIRIVGQCKDGCPCWQALLINEBEGFCGGTILSPF 269
QY 205 WVLTAACWDSKKLVRLEGYDLRMEKMLDIDKEVYVHPNYSKSTINDIALHLIA 264
DB 270 YILTAACWDSKKLVRLEGYDLRMEKMLDIDKEVYVHPNYSKSTINDIALHLIA 264
QY 265 QPATLSQTLVPICLPDSGLARELNQAGQET-LVTGQGYHSREKAKRNTFYVLPFIKI 323
DB 330 TPTTPMVAVAPACLPEDMAESTL--MTQKGIYSGRGTHKKGQSTR-----LKMTEV 382
QY 324 PVPVPHNCESEVSNVSNVSNVSNVSNVSNVSNVSNVSNVSNVSNVSNVSNVSNV 383
DB 393 PYVDNRSCGLSSSFLITQNMPCAGYDTKQEDACQDSGGPHVTRKQDTYFTGIVSWGES 442
QY 384 CGLHNYGVYTVSRYLDMTHGIRDKAPQ-KSWAP 419
DB 443 CARKGKYGITKVTAFPLAKMIDRSMKTRGLPAAKSHAP 479

RESULT 41
US-09-367-791A-27
Sequence 27, Application US/09367791A
Patent No. 6573071
GENERAL INFORMATION:
APPLICANT: Himmelsbach, Michele
Schlokal, Uwe
Dorner, Friedrich
Fisch, Andreas
Bibl, Johann
TITLE OF INVENTION: Factor X Analogues With
a Modified Protease Cleavage Site
NUMBER OF SEQUENCES: 122
CORRESPONDENCE ADDRESS:
ADDRESS: Townsend and Townsend and Crew LLP
STREET: Two Embarcadero Center, Eighth Floor
CITY: San Francisco
STATE: CA
COUNTRY: USA
ZIP: 94111-3834
COMPUTER READABLE FORM:

MEDIUM TYPE: Diskette
COMPUTER: IBM Compatible
OPERATING SYSTEM: DOS
SOFTWARE: FASTSEQ for Windows Version 2.0
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/09/367, 791A
FILING DATE: 12-No. 6573071-1999
CLASSIFICATION: <Unknown>
PRIOR APPLICATION DATA:
APPLICATION NUMBER: AT A 335/97
FILING DATE: 27-FEB-1997
APPLICATION NUMBER: NO PCT/AT98/00045
FILING DATE: 27-FEB-1998
ATTORNEY/AGENT INFORMATION:
NAME: Auenhus, Scott L.
REGISTRATION NUMBER: 42,471
REFERENCE/DOCKET NUMBER: 20695D-000700US
TELECOMMUNICATION INFORMATION:
TELEPHONE: (415) 576-0200
TELEFAX: (415) 576-0300
TELEX: <Unknown>
INFORMATION FOR SEQ ID NO: 27:
SEQUENCE CHARACTERISTICS:
LENGTH: 488 amino acids
TYPE: amino acid
STRANDEDNESS: <Unknown>
TOPOLOGY: linear
MOLECULE TYPE: protein
SEQUENCE DESCRIPTION: SEQ ID NO: 27:
US-09-367-791A-27

Query Match 34.6%; Score 803; DB 4; Length 488;
Best Local Similarity 35.4%; Pred. No. 1.2e-60;
Matches 162; Conservative 87; Mismatches 152; Indels 56; Gaps 9;
QY 1 ANSFLRLHSSLERECIEICDPEBAKEIFQVNDTLAFWSKHYDQCLVPLEHPCA 60
DB 41 ANSFLRLHSSLERECIEICDPEBAKEIFQVNDTLAFWSKHYDQCLVPLEHPCA 60
QY 61 SLCCGHTCIDIGSPSCDPSGMEGRQGVSVFLNCSLDNGGCTHYCLEVGMRCSC 120
DB 95 --CQNGKCKGDLGELYCTCLBGFEGKNCLEPTRLK-CSLDNGDQDQCHEQNSVVCSC 151
QY 121 APGYKLDLQCHPAVKPCGPRMREKRSLSKEDTEDQD-----QYD 167
DB 152 ARGYTLADNGKACIPTPGYPCGR-QTLERKRSVVAQATSSGSEAPDSITWKPYDAADID 209
QY 168 P-----RLIDGKMTRRGDSPMQVLLDSKKKLAACAVALIHPS 204
DB 210 PTENPFLDLDFNQTPERGDNNLTIRIVGQCKDGCPCWQALLINEBEGFCGGTILSPF 269
QY 205 WVLTAACWDSKKLVRLEGYDLRMEKMLDIDKEVYVHPNYSKSTINDIALHLIA 264
DB 270 YILTAACWDSKKLVRLEGYDLRMEKMLDIDKEVYVHPNYSKSTINDIALHLIA 264
QY 265 QPATLSQTLVPICLPDSGLARELNQAGQET-LVTGQGYHSREKAKRNTFYVLPFIKI 323
DB 330 TPTTPMVAVAPACLPEDMAESTL--MTQKGIYSGRGTHKKGQSTR-----LKMTEV 382
QY 324 PVPVPHNCESEVSNVSNVSNVSNVSNVSNVSNVSNVSNVSNVSNVSNVSNVSNV 383
DB 393 PYVDNRSCGLSSSFLITQNMPCAGYDTKQEDACQDSGGPHVTRKQDTYFTGIVSWGES 442
QY 384 CGLHNYGVYTVSRYLDMTHGIRDKAPQ-KSWAP 419
DB 443 CARKGKYGITKVTAFPLAKMIDRSMKTRGLPAAKSHAP 479

RESULT 42
US-08-295-411-5
Sequence 5, Application US/08295411
Patent No. 5679639
GENERAL INFORMATION:

APPLICANT: Griffin, John H.
APPLICANT: Westers, Rolf M.
TITLE OF INVENTION: Serine Protease-Derived Polypeptides and
TITLE OF INVENTION: Anti-Peptide Antibodies, Systems and Therapeutic Methods
TITLE OF INVENTION: for Inhibiting Coagulation
NUMBER OF SEQUENCES: 10
CORRESPONDENCE ADDRESS:
ADDRESS: Office of Patent Counsel, The Scripps
ADDRESS: Research Institute
STREET: 10666 No. 56793rd Torrey Pines Road, TPC 8
CITY: La Jolla
STATE: CA
COUNTRY: USA
ZIP: 92037
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patent Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/295,411
FILING DATE: 22-AUG-1994
CLASSIFICATION: 530
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 07/793,989
FILING DATE: 18-NOV-1991
CLASSIFICATION: 530
ATTORNEY/AGENT INFORMATION:
NAME: Fitting, Thomas
REGISTRATION NUMBER: 34,163
REFERENCE/DOCKET NUMBER: TSR1263.0C1
TELECOMMUNICATION INFORMATION:
TELEPHONE: 619-554-2937
TELEFAX: 619-554-6312
INFORMATION FOR SEQ ID NO: 5:
SEQUENCE CHARACTERISTICS:
LENGTH: 406 amino acids
TYPE: amino acid
TOPOLOGY: linear
MOLECULE TYPE: protein
HYPOTHETICAL: NO
ANTI-SENSE: NO
FEATURE:
NAME/KEY: Region
LOCATION: 1..152
OTHER INFORMATION: /note= "Factor VII Light Chain"
FEATURE:
NAME/KEY: Region
LOCATION: 153..406
OTHER INFORMATION: /note= "Factor VII Heavy Chain"
US-08-295-411-5

Query Match 33.7%; Score 783; DE 1; Length 406;
Best Local Similarity 38.8%; Pred. No. 5.1e-59;
Matches 164; Conservative 76; Mismatches 147; Indels 36; Gaps 10;

QY 1 ANSFEHLRHSIERECTIECTCFEBAKEIFQVNDTLAFMSKRVHDGQCLVPLRHPCA 60
DB 1 ANSFEHLRHSIERECTIECTCFEBAKEIFQVNDTLAFMSKRVHDGQCLVPLRHPCA 60
QY 61 SLCCGHCITCIDIGISFSCDCRSMSGRFCQ-REVSFLNLSLNGCCTHYCLEVGRK-C 118
DB 53 SPONGSCKTOLOSYICFLPAFRGNCEYHKDDOLICVNGGCEQYCSHGTGKSC 112
QY 119 SCAPGYKLDLLQCHPAVFPQGRPMKREKSHUKRDEQDQVDPRLIDGRKTR 178
DB 113 RCHGGSLADGVCSTVYEPCK-IPLEKRYA-----SKQRIYGVKVPCK 161
QY 179 GSPWVYLLDSKGLACGAVLIHSVYLTARQMDSK--KLIIVLGEYDLRWEKKE 235
DB 162 GBCWVLLVNAQL-CGGTLINTTWVSAHCFKIKRWMLIAVIGHEDLSHDGDE 220
QY 236 LDLDIEVYVHPNYSKSTTDNDIALHLAQATISQTVICLPSGLARELNQAGGT 295

DB 221 QSRRAQVILIPSTVYGGTNDIALRLHPVYLIDHWELCPERTFSRLAV-RFS 279
QY 296 LITGGHSSRREKAREKNETVNLFIKIPVPHNCSFV-----SNWSEMMCGILG 350
DB 280 LVSGGQLDRGATA-----LELVNLVPRMTQCLQSRKVDSENLTEYPCAGSD 334
QY 351 DRQACRGDSGGPMVASFHGTWFLVGLVSWGCGLLNRYVYKSRLLDIHGHIDK 410
DB 335 GSKDSCKDSGGPHATVHGTWFLVGLVSWGCGCATVGHFGVYTRVSYLWLMQIMRSE 394
QY 411 EAP 413
DB 395 PRP 397

RESULT 43
US-08-955-471-5
Sequence 5, Application US/08955471
Patent No. 5968751
GENERAL INFORMATION:
APPLICANT: Griffin, John H.
APPLICANT: Westers, Rolf M.
TITLE OF INVENTION: Serine Protease-Derived Polypeptides and
TITLE OF INVENTION: Anti-Peptide Antibodies, Systems and Therapeutic Methods
TITLE OF INVENTION: for Inhibiting Coagulation
NUMBER OF SEQUENCES: 10
CORRESPONDENCE ADDRESS:
ADDRESS: Office of Patent Counsel, The Scripps
ADDRESS: Research Institute
STREET: 10666 No. 5968751th Torrey Pines Road, TPC 8
CITY: La Jolla
STATE: CA
COUNTRY: USA
ZIP: 92037
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patent Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/955,471
FILING DATE:
CLASSIFICATION:
PRIOR APPLICATION DATA:
APPLICATION NUMBER: 08/295,411
FILING DATE:
CLASSIFICATION:
ATTORNEY/AGENT INFORMATION:
NAME: Fitting, Thomas
REGISTRATION NUMBER: 34,163
REFERENCE/DOCKET NUMBER: TSR1263.0C1
TELECOMMUNICATION INFORMATION:
TELEPHONE: 619-554-2937
TELEFAX: 619-554-6312
INFORMATION FOR SEQ ID NO: 5:
SEQUENCE CHARACTERISTICS:
LENGTH: 406 amino acids
TYPE: amino acid
TOPOLOGY: linear
MOLECULE TYPE: protein
HYPOTHETICAL: NO
ANTI-SENSE: NO
FEATURE:
NAME/KEY: Region
LOCATION: 1..152
OTHER INFORMATION: /note= "Factor VII Light Chain"
FEATURE:
NAME/KEY: Region
LOCATION: 153..406
OTHER INFORMATION: /note= "Factor VII Heavy Chain"
US-08-955-471-5

Query Match 33.7%; Score 783; DB 2; Length 406;
 Best Local Similarity 38.8%; Pred. No. 5, 1e-59;
 Matches 164; Conservative 76; Mismatches 147; Indels 36; Gaps 10;

QY 1 ANSFLEELRSHSLRECEIEICDFEBAKEIFQNVDTLAFWSKRVNDGQCLVLEHPCA 60
 DB 1 ANAFLEELRPSGLRECEKEQCSFEARERIFDARFKLFWISYSDGQC-----AS 52
 QY 61 SLCCGAGTCDIGISFSCDCSGMEGRPCQ-REVSFLNGSLDGGCTHYCLEYGMRR-C 118
 DB 53 SPQNGSGCKDQLOSYICFCLPAFEGRNCEETKDDOLICVNRNGCEQYCSDHGTGRSC 112
 QY 119 SCAPGYKLGDDLLQCHPAKPCGSRPMKMEKRSKLRDTEQDQVDPRLIDGMKTR 178
 DB 113 RCHEGYSLLADGVSCTPYVETPOK-IPLEKRA-----SKQGRVSGKCPK 161
 QY 179 GDSFQWVLLDSKKKLAGAVLHPSWVLTAAHCDMSK--KLVLRLGEYDLRMEKWE 235
 DB 162 GECPMQVLLVNGAQL-CGGTLINITWVSAHCFDKIKWRMLAVLSEHLSHDGDE 220
 QY 236 LDLDIKVFNHNYSKSTNDIALLHLAOPATLSQITVPLCPDSGLAEHLNQAQGT 295
 DB 221 QSRRAQVILPSTYVPGTTHDIALRLHQPVLLDHVPLCLPRTSEKTLAFV-RFS 279
 QY 296 LVTGWGSHSREKEAKRRTFVLFKIPVPHNECEVW-----SNWSENMLCAGILG 350
 DB 280 LVSGWGLDRGATG-----LELWLVNVRPLMTQDCLQSRKXGDSPTITRYMCAQYSD 334
 QY 351 DRDAGCSGDSGGPMVASFHGTWFLVGLVSGEGCLMNTGVTYKSRYLDMIGHIRDK 410
 DB 335 GSKDSCGDSGGPMVATHRGWTLGIVSWGQCATVGHGYTVVSQYLEMLQKLMRSE 394
 QY 411 EAP 413
 DB 395 PRP 397

RESULT 44
 PCT-US92-10242-5
 Sequence 5, Application FC/TUS9210242
 GENERAL INFORMATION:
 APPLICANT: Griffin, John H.
 APPLICANT: Westers, Rolt
 TITLE OF INVENTION: Serine Protease-Derived Polypeptides and
 TITLE OF INVENTION: Anti-Peptide Antibodies, Systems and Therapeutic Methods
 TITLE OF INVENTION: for Inhibiting Coagulation
 NUMBER OF SEQUENCES: 10
 CORRESPONDENCE ADDRESS:
 ADDRESSER: Office of Patent Counsel, The Scripps
 ADDRESSER: Research Institute
 STREET: 10666 North Torrey Pines Road, TPC 8
 CITY: La Jolla
 STATE: CA
 COUNTRY: USA
 ZIP: 92037
 COMPUTER READABLE FORM:
 MEDIUM TYPE: Floppy disk
 COMPUTER: IBM PC compatible
 OPERATING SYSTEM: PC-DOS/MS-DOS
 SOFTWARE: Patentia Release #1.0, Version #1.25
 CURRENT APPLICATION DATA:
 APPLICATION NUMBER: PCT/US92/10242
 FILING DATE: 19921116
 CLASSIFICATION:
 PRIOR APPLICATION DATA:
 APPLICATION NUMBER: US 07/793,989
 FILING DATE: 18-NOV-1991
 ATTORNEY/AGENT INFORMATION:
 NAME: Fitting, Thomas
 REGISTRATION NUMBER: 34,163
 REFERENCE/DOCKET NUMBER: SCRO472P
 TELECOMMUNICATION INFORMATION:
 TELEPHONE: 619-554-2937

TELEFAX: 619-554-6312
 INFORMATION FOR SEQ. ID NO. 5:
 SEQUENCE CHARACTERISTICS:
 LENGTH: 406 amino acids
 TYPE: AMINO ACID
 TOPOLOGY: linear
 MOLECULE TYPE: protein
 HYPOTHEICAL: NO
 ANTI-SENSE: NO
 FEATURE:
 NAME/KEY: Region
 LOCATION: 1..152
 OTHER INFORMATION: /note= "Factor VII light chain"
 NAME/KEY: Region
 LOCATION: 153..406
 OTHER INFORMATION: /note= "Factor VII Heavy chain"
 PCT-US92-10242-5

Query Match 33.7%; Score 783; DB 5; Length 406;
 Best Local Similarity 38.8%; Pred. No. 5, 1e-59;
 Matches 164; Conservative 76; Mismatches 147; Indels 36; Gaps 10;

QY 1 ANSFLEELRSHSLRECEIEICDFEBAKEIFQNVDTLAFWSKRVNDGQCLVLEHPCA 60
 DB 1 ANAFLEELRPSGLRECEKEQCSFEARERIFDARFKLFWISYSDGQC-----AS 52
 QY 61 SLCCGAGTCDIGISFSCDCSGMEGRPCQ-REVSFLNGSLDGGCTHYCLEYGMRR-C 118
 DB 53 SPQNGSGCKDQLOSYICFCLPAFEGRNCEETKDDOLICVNRNGCEQYCSDHGTGRSC 112
 QY 119 SCAPGYKLGDDLLQCHPAKPCGSRPMKMEKRSKLRDTEQDQVDPRLIDGMKTR 178
 DB 113 RCHEGYSLLADGVSCTPYVETPOK-IPLEKRA-----SKQGRVSGKCPK 161
 QY 179 GDSFQWVLLDSKKKLAGAVLHPSWVLTAAHCDMSK--KLVLRLGEYDLRMEKWE 235
 DB 162 GECPMQVLLVNGAQL-CGGTLINITWVSAHCFDKIKWRMLAVLSEHLSHDGDE 220
 QY 236 LDLDIKVFNHNYSKSTNDIALLHLAOPATLSQITVPLCPDSGLAEHLNQAQGT 295
 DB 221 QSRRAQVILPSTYVPGTTHDIALRLHQPVLLDHVPLCLPRTSEKTLAFV-RFS 279
 QY 296 LVTGWGSHSREKEAKRRTFVLFKIPVPHNECEVW-----SNWSENMLCAGILG 350
 DB 280 LVSGWGLDRGATG-----LELWLVNVRPLMTQDCLQSRKXGDSPTITRYMCAQYSD 334
 QY 351 DRDAGCSGDSGGPMVASFHGTWFLVGLVSGEGCLMNTGVTYKSRYLDMIGHIRDK 410
 DB 335 GSKDSCGDSGGPMVATHRGWTLGIVSWGQCATVGHGYTVVSQYLEMLQKLMRSE 394
 QY 411 EAP 413
 DB 395 PRP 397

RESULT 45
 US-08-475-845-2
 Sequence 2, Application US/08475845
 Patent No. 5788965
 GENERAL INFORMATION:
 APPLICANT: Berkner, Kathleen L.
 APPLICANT: Petersen, Lars C.
 APPLICANT: Hart, Charles E.
 APPLICANT: Hedner, Ulla
 APPLICANT: Bregengaard, Claus
 TITLE OF INVENTION: Modified Factor VII
 NUMBER OF SEQUENCES: 4
 CORRESPONDENCE ADDRESS:
 ADDRESSER: Townsend and Townsend Kourile and Crew
 STREET: One Market Plaza, Stewart Street Tower
 CITY: San Francisco
 STATE: CA

COUNTRY: U.S.A.
ZIP: 94105-1492
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patent Release #1.24
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/475,845
FILING DATE: 07-JUN-1995
CLASSIFICATION: 435
PRIOR APPLICATION DATA:
APPLICATION NUMBER: 08/327,690
FILING DATE: 24-OCT-1994
CLASSIFICATION: 435
PRIOR APPLICATION DATA:
APPLICATION NUMBER: 08/065,725
FILING DATE: 21-MAY-1993
CLASSIFICATION: 435
PRIOR APPLICATION DATA:
APPLICATION NUMBER: 07/662,920
FILING DATE: 28-FEB-1991
CLASSIFICATION: 435
ATTORNEY/AGENT INFORMATION:
NAME: Parmelee, Steven W.
REGISTRATION NUMBER: 31,990
REFERENCE/DOCKET NUMBER: 13952-8-4
TELECOMMUNICATION INFORMATION:
TELEPHONE: 206-467-9600
TELEFAX: 415-543-5043
INFORMATION FOR SEQ ID NO: 2:
SEQUENCE CHARACTERISTICS:
LENGTH: 444 amino acids
TYPE: amino acid
TOPOLOGY: linear
MOLECULE TYPE: protein
US-08-475-845-2

Query Match 33.7%; Score 783; DB 1; Length 444;
Best Local Similarity 38.8%; Pred. No. 5,66-59;
Matches 164; Conservative 76; Mismatches 147; Indels 36; Gaps 10;

QY 1 ANSFLELRHSSLRERCEIEICDFEBAKEIFQNVDTLAFMSKAVDQCVLPLEHPCA 60
DB 39 ANAFLELRPSGLERBECKEQCSFEAREIFKDAERTKLFMSYSDQD-----AS 90
QY 61 SLCCGHTCIDIGSFCSCDRSGMGRFCQ-REVSFLNSLUNGSCCHYCLEBVMR-C 118
DB 91 SPQNGSSCKDQLOSITFCPLPAFBGRNCETHKDQILCVNENGGCEQYCSDHGTGRSC 150
QY 119 SCAPGYKLGDLLQCHPAVFPQGRPWKMEKRSKSHLKDTEDQDQVDPRLIDGMTR 178
DB 151 RCHBGYSLLADGVSCPTVVEYPCGK-IPILEKNA-----SKQGRIVGKVCCK 199
QY 179 GDSPPQVVLDSKKKACGAVLIHPSWUTRAHQMDESK---KLIVRIGDYLRWEKWE 235
DB 200 GECPPQVLLVNGAQL-CGDTLINTIIVWSAAHCFDKIKWRMLTAVGSHDLSEHDGE 258
QY 236 LLDLIXEVFVHPNYSKSTTDNDIALHLAOPATLSQTIIVPLDPSGLARELNAGQET 295
DB 259 QSRRAQVITISTVIGTTHDIALRLHQPVLIDHVVPLCHPERFSRITLAVY-RFS 317
QY 296 LVYWGYSHSREKARKNRTFVLANFIKLPVPHNECSEVM-----SNMVSNNLCAQILG 350
DB 318 LVSGWQLLDRGATA-----LELVANVPRMLTQDCLQSRKVGSPNITREYVFCAGYSD 372
QY 351 DQDLACGDSGSGPMWASFGHTWFLVGLVMSGCGILHAYGVYTKVRYDTHGHITDK 410
DB 373 GSKDCSGDSGGBHATHYRGTWYLTGLVWSGCGATVGHFVYTRVSYILEMLQKLMSE 432
QY 411 EAP 413
DB 433 PRP 435

RESULT 46

US-08-327-690-2
Sequence 2, Application US/08327690
Patent No. 5817788
GENERAL INFORMATION:
APPLICANT: Berkner, Kathleen L.
APPLICANT: Petersen, Lars C.
APPLICANT: Hart, Charles E.
APPLICANT: Hedner, Ulla
APPLICANT: Bregengaard, Claus
TITLE OF INVENTION: Modified Factor VII
NUMBER OF SEQUENCES: 4
CORRESPONDENCE ADDRESS:
ADDRESSEE: Townsend and Townsend Khouirle and Crew
STREET: One Market Plaza, Steuart Street Tower
CITY: San Francisco
STATE: CA
COUNTRY: U.S.A.
ZIP: 94105-1492
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patent Release #1.24
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/327,690
FILING DATE: 24-OCT-1994
CLASSIFICATION: 435
PRIOR APPLICATION DATA:
APPLICATION NUMBER: 08/065,725
FILING DATE: 21-MAY-1993
CLASSIFICATION: 435
PRIOR APPLICATION DATA:
APPLICATION NUMBER: 07/662,920
FILING DATE: 28-FEB-1991
CLASSIFICATION: 435
ATTORNEY/AGENT INFORMATION:
NAME: Parmelee, Steven W.
REGISTRATION NUMBER: 31,990
REFERENCE/DOCKET NUMBER: 13952-8-3
TELECOMMUNICATION INFORMATION:
TELEPHONE: 206-467-9600
TELEFAX: 415-543-5043
INFORMATION FOR SEQ ID NO: 2:
SEQUENCE CHARACTERISTICS:
LENGTH: 444 amino acids
TYPE: amino acid
TOPOLOGY: linear
MOLECULE TYPE: protein
US-08-327-690-2

Query Match 33.7%; Score 783; DB 2; Length 444;
Best Local Similarity 38.8%; Pred. No. 5,66-59;
Matches 164; Conservative 76; Mismatches 147; Indels 36; Gaps 10;

QY 1 ANSFLELRHSSLRERCEIEICDFEBAKEIFQNVDTLAFMSKAVDQCVLPLEHPCA 60
DB 39 ANAFLELRPSGLERBECKEQCSFEAREIFKDAERTKLFMSYSDQD-----AS 90
QY 61 SLCCGHTCIDIGSFCSCDRSGMGRFCQ-REVSFLNSLUNGSCCHYCLEBVMR-C 118
DB 91 SPQNGSSCKDQLOSITFCPLPAFBGRNCETHKDQILCVNENGGCEQYCSDHGTGRSC 150
QY 119 SCAPGYKLGDLLQCHPAVFPQGRPWKMEKRSKSHLKDTEDQDQVDPRLIDGMTR 178
DB 151 RCHBGYSLLADGVSCPTVVEYPCGK-IPILEKNA-----SKQGRIVGKVCCK 199
QY 179 GDSPPQVVLDSKKKACGAVLIHPSWUTRAHQMDESK---KLIVRIGDYLRWEKWE 235
DB 200 GECPPQVLLVNGAQL-CGDTLINTIIVWSAAHCFDKIKWRMLTAVGSHDLSEHDGE 258

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Query Match      33.7%; Score 783; DB 2; Length 444;
Best Local Similarity 38.0%; Pred. No.5,6e-59;
Matches 164; Conservative 76; Mismatches 147; Indels 36; Gaps 10;

QY      1 ANSLEELRHSLSRERCIEICDFEEAKELPQNVDDTLAFMSKENVGQCVLPLEHPCA 60
Db      39 ANAFLEELRPSLRECRKEQCSFEELRPELPDARKTLWISYSDQC-----AS 90
QY      61 SLCCGHGTCDIGIGSSCDGRSGWEGRFQ-REVSFLNCSLDNGGCTHYCLEEYMR-C 118
Db      91 SPQWNGSSCKQLQSYICLPAPFGRNCEYTKDQLCVNENGGQYQCSDHGTGRSC 150
QY      119 SCAPYKLGDDLLCPHAYKPCGRPMKREKKSLSLKRLTEDQHQVDQHPDLIDGKTLR 178
Db      151 RCEGYSLALGVSCTPTVEIPCK-IPIDRKNA-----SKPGATVGRKVCER 199
QY      179 GDSPMQVYLLDGKKKLACGAVLHSHSVLTPAACHMDESK--KLVRGEYDLRREKWE 235
Db      200 GECPMQVLLVNGAQL-CGGTLINVTIWWASAACHFDKIKWRRLIIVLGEHDLSEHDGB 258
QY      236 LDDDKETVFNHNSSTTDNDNLALHLPATLSQTVPLCPDSGLARELNQAGET 295
Db      259 QSRRAVQVLTISTYRGTTNHDLALHLHQPVYLLTDHVPCLCPERTSEETPLA-FV-RFS 317
QY      318 LVTGWGYSSEKEKARNRTEFLVNFIKI PVDPNECEFW-----SNWSENNLCAGILD 350
Db      318 LVSGWGLDLRGATA----LELVAVINVPRLMTQCLQGRKATGDSPINTEYMG CAGYSD 372
QY      351 DRDPADEGDSGCPVMAVSFTGTFVLGVLSVSGGCGLLANTGYTTKYSRLDWHGHLRDK 410
Db      373 GSDSDSKDSDSGPLAHYGRGTYLLTGLVSWGCGATVGHGPTVTRVSQYIEMLQKMRSE 432
QY      411 EAP 413
Db      433 PRP 435

RESULT 48
: US-08-537-807-2
: Sequence 2, Application US/08537807
: Patent No. 5861374
: GENERAL INFORMATION:
: APPLICANT:
: TITLE OF INVENTION: Modified Factor VII
: NUMBER OF SEQUENCES: 4
: COMPUTER READABLE FORM:
: MEDIUM TYPE: Floppy disk
: OPERATING SYSTEM: IBM PC compatible
: SOFTWARE: Patent Release #1.0, Version #1.25
: CURRENT APPLICATION DATA:
: APPLICATION NUMBER: US/08/537,807
: FILING DATE:
: CLASSIFICATION:
: PRIOR APPLICATION DATA:
: APPLICATION NUMBER: PCT/US94/05779
: FILING DATE: 23-MAY-1994
: APPLICATION NUMBER: US 08/065,725
: FILING DATE: 21-MAY-1993
: PRIOR APPLICATION DATA:
: APPLICATION NUMBER: US 07/662,920
: FILING DATE: 28-FEB-1991
: ATTORNEY/AGENT INFORMATION:
: NAME: Patmelee, Steven W.
: REGISTRATION NUMBER: 31,990
: REFERENCE/DOCKET NUMBER: 13952-8-1PC
: TELECOMMUNICATION INFORMATION:
: TELEPHONE: 206-467-9600
: TELEFAX: 415-543-5043
: INFORMATION FOR SEQ ID NO: 2:
: SEQUENCE CHARACTERISTICS:
: LENGTH: 444 amino acids
: TYPE: amino acid

```

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; TOPOLOGY: linear
; MOLECULE TYPE: protein
; US-08-537-807-2

Query Match
Best Local Similarity 33.7%; Score 783; DB 2; Length 444;
Matches 164; Conservative 76; Mismatches 147; Indels 36; Gaps 10;

QY 1 ANSFLERHSHSLERECIEICDPEBAKEIFQNVDTLAFNSKHVNDGQCLVPLEHPCA 60
DB 39 ANAFLEIRPGSLERECEKQCSFEARBFKDAERTKLFMYSDDQC-----AS 90
QY 61 SLCCGHTCTDIGSFCDCRSQMEGRPCQ-REVSFLNGSLDNGCTHYCLEEVGMRR-C 118
DB 91 SPQNGSGCKDQLOSYTCFCLPAREGRNCEHTKDQCLVNGNGCEQYCSHTGTKASC 150
QY 119 SCAPGYKLGDDLLQCHPAVKFPCGRPKRMKKRSHLKRTDEQEDVDPRLLDGKTRR 178
DB 151 RCHGYSLADGVSCPTVEYPCQK-IPLEKRNA-----SKPGRIVGKVCPEK 199
QY 179 GDSFWQVLLDSKKKLACGAVLIHPSWVLTAAHCWDESK--KLVRLGEYDLRMEKME 235
DB 200 GECFWQVLLVNGAQL-CGGTLINTIWWVSAHCPDKIKMRNLIIVLGEHLSHDDE 258
QY 226 LDLDIKFVHYHRYKSTTNDIALHLAQPATLSQITVPICLPDSGLAEELNQAQET 295
DB 229 QSRRAQVILPSTYVGTNHDLRLHQPVLTDHVPLCLPRTFSERTLAFFV-RFS 317
QY 236 LVTGNGYHSSREKEAKRNRTPVNFIRKIPVPHNECESEVM-----SNMSENMLCAGILG 350
DB 318 LVSGWQGLDRGATA-----LELMVNLVPELMTQDCLQSKRVKDSNITFPCAGYSD 372
QY 351 DRQDACBGDSGGPMVASFHGTWFLVGLVSWGBCGLLNHYVYTKVSRYLMIHGHIDK 410
DB 373 GSKDSCKDSGGPHATHRYGTWYLTGIVSWGCCATVGHGVYTRVSQYIEMLOKLMRSE 432
QY 411 EAP 413
DB 433 PRP 435

RESULT 49
US-08-871-003-2
; Sequence 2, Application US/08871003
; Patent No. 5997864
; GENERAL INFORMATION:
; APPLICANT: Hart, Charles E.
; APPLICANT: Petersen, Lars C.
; APPLICANT: Hedner, Ulla
; APPLICANT: Rasmussen, Mirella E.
; TITLE OF INVENTION: Modified Factor VII
; NUMBER OF SEQUENCES: 4
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Zymogenetics, Inc.
; STREET: 1201 Eastlake Avenue East
; CITY: Seattle
; STATE: WA
; COUNTRY: USA
; ZIP: 98102
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: Patent In Release #1.24
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/871,003
; FILING DATE:
; CLASSIFICATION: 514
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER:
; FILING DATE:
; CLASSIFICATION: 514
; ATTORNEY/AGENT INFORMATION:

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; NAME: Sawielak, Deborah A
; REGISTRATION NUMBER: 37,438
; REFERENCE/DOCKET NUMBER: 90-07C7
; INFORMATION FOR SEQ ID NO: 2:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 444 amino acids
; TYPE: amino acid
; TOPOLOGY: linear
; MOLECULE TYPE: protein
; US-08-871-003-2

Query Match
Best Local Similarity 33.7%; Score 783; DB 2; Length 444;
Matches 164; Conservative 76; Mismatches 147; Indels 36; Gaps 10;

QY 1 ANSFLERHSHSLERECIEICDPEBAKEIFQNVDTLAFNSKHVNDGQCLVPLEHPCA 60
DB 39 ANAFLEIRPGSLERECEKQCSFEARBFKDAERTKLFMYSDDQC-----AS 90
QY 61 SLCCGHTCTDIGSFCDCRSQMEGRPCQ-REVSFLNGSLDNGCTHYCLEEVGMRR-C 118
DB 91 SPQNGSGCKDQLOSYTCFCLPAREGRNCEHTKDQCLVNGNGCEQYCSHTGTKASC 150
QY 119 SCAPGYKLGDDLLQCHPAVKFPCGRPKRMKKRSHLKRTDEQEDVDPRLLDGKTRR 178
DB 151 RCHGYSLADGVSCPTVEYPCQK-IPLEKRNA-----SKPGRIVGKVCPEK 199
QY 179 GDSFWQVLLDSKKKLACGAVLIHPSWVLTAAHCWDESK--KLVRLGEYDLRMEKME 235
DB 200 GECFWQVLLVNGAQL-CGGTLINTIWWVSAHCPDKIKMRNLIIVLGEHLSHDDE 258
QY 226 LDLDIKFVHYHRYKSTTNDIALHLAQPATLSQITVPICLPDSGLAEELNQAQET 295
DB 229 QSRRAQVILPSTYVGTNHDLRLHQPVLTDHVPLCLPRTFSERTLAFFV-RFS 317
QY 236 LVTGNGYHSSREKEAKRNRTPVNFIRKIPVPHNECESEVM-----SNMSENMLCAGILG 350
DB 318 LVSGWQGLDRGATA-----LELMVNLVPELMTQDCLQSKRVKDSNITFPCAGYSD 372
QY 351 DRQDACBGDSGGPMVASFHGTWFLVGLVSWGBCGLLNHYVYTKVSRYLMIHGHIDK 410
DB 373 GSKDSCKDSGGPHATHRYGTWYLTGIVSWGCCATVGHGVYTRVSQYIEMLOKLMRSE 432
QY 411 EAP 413
DB 433 PRP 435

RESULT 50
US-08-464-233-2
; Sequence 2, Application US/08464233
; Patent No. 6039944
; GENERAL INFORMATION:
; APPLICANT: Berkner, Kathleen L.
; APPLICANT: Petersen, Lars C.
; APPLICANT: Hart, Charles E.
; APPLICANT: Hedner, Ulla
; APPLICANT: Bregengaard, Claus
; TITLE OF INVENTION: Modified Factor VII
; NUMBER OF SEQUENCES: 4
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Townsend and Townsend Kourie and Crew
; STREET: One Market Plaza, Stewart Street Tower
; CITY: San Francisco
; STATE: CA
; COUNTRY: U.S.A.
; ZIP: 94105-1492
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: Patent In Release #1.24
; CURRENT APPLICATION DATA:

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APPLICATION NUMBER: US/08/464,233
FILING DATE:
CLASSIFICATION:
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US/08/327,690
FILING DATE: 24-OCT-1994
APPLICATION NUMBER: 08/065,725
FILING DATE: 21-MAY-1993
CLASSIFICATION:
PRIOR APPLICATION DATA:
APPLICATION NUMBER: 07/662,920
FILING DATE: 28-FEB-1991
CLASSIFICATION:
ATTORNEY/AGENT INFORMATION:
NAME: Parmelee, Steven W.
REGISTRATION NUMBER: 31,990
REFERENCE/DOCKET NUMBER: 13952-8-3
TELECOMMUNICATION INFORMATION:
TELEPHONE: 206-467-9600
TELEFAX: 415-543-5043
INFORMATION FOR SEQ ID NO: 2:
SEQUENCE CHARACTERISTICS:
LENGTH: 444 amino acids
TYPE: amino acid
TOPOLOGY: linear
MOLECULE TYPE: protein
US-08-464-233-2

Query Match 33.7%; Score 783; DB 3; Length 444;
Best Local Similarity 38.8%; Pred. No. 5,6e-59;
Matches 164; Conservative 76; Mismatches 147; Indels 36; Gaps 10;

QY 1 ANSPLEELHNSLEBCEIEICDFEAKKIFQNVDDTLAFMSKXNDGQCLVPLEHPCA 60
DB 39 ANATLEELRPGSLERCKEBOCCFEEARERIFDARERKLFWSISDQC-----AS 90
QY 61 SLCCGHGTCIDIGSFSCDCRSGBEGRFQ-REVSFLNCSLDNGGCTHYCLEBGMWR-C 118
DB 91 SPQNGSGCKDQLOSTYICFCIPAFEGANCETHKDQILCVNENGGEQYCSHGTGKSC 150
QY 119 SCAPGYKLDLLOCHPAVKEPCGRPWKMKRSHLKRTDEQDQVDPRLDGKTR 178
DB 151 RCHBYSILADGVSCTPTVEYFCGK-IPLEKRNA-----SKPGRIVGKVCPR 199
QY 179 GDSFWQVLLDSKKKLAGAVLIHPSWVLTAAHMCDESK---KLIVRAGEYDRLRWKWE 235
DB 200 GECFQVLLLVNGAQL-CGGTLINTWVSAAHCEDEKIKMNRNLAVLEHDSHSDGE 258
QY 236 LDLDKEVFNHNPVSKSTTNDIALHLAQPATLSQITVPCIPDSGLAEREINQAGQET 295
DB 259 QSRVAVIIPSTYVPGTTNHDIALRLHQPVVLTLDHVPVLCIPERTSERTLAFV-RFS 317
QY 296 LVWGWSHSSREKKAERTRFVLFKIPVPHNCEWV-----SNVSENMICGILG 350
DB 318 LVSWGQLLDRGATL-----LELMTLVNRLMTQCCQSKRGVDSPTITVFCAGYSD 372
QY 351 DRDACEGDSGGPVVASFHGTWFLVGLVSWGSGALLANVGYTVKVSYLDMTHGHTRPK 410
DB 373 GSKDSCKGDSGGPVHATHTYRGTWLTGLVSWGCGATVGHGVYTVNSQYIMQKMRSE 432
QY 411 EAP 413
DB 433 PRP 435

RESULT 51
US-09-189-607-2
Sequence 2, Application US/09189607
Patent No. 6168789
GENERAL INFORMATION:
APPLICANT: Berkner, Kathleen L.
APPLICANT: Petersen, Lars C.
APPLICANT: Hart, Charles E.

APPLICANT: Hedner, Ulla
APPLICANT: Bregengaard, Claus
TITLE OF INVENTION: Modified Factor VII
NUMBER OF SEQUENCES: 4
CORRESPONDENCE ADDRESS:
ADDRESSEE: Townsend and Townsend Kourie and Crew
STREET: One Market Plaza, Stewart Street Tower
CITY: San Francisco
STATE: CA
COUNTRY: U.S.A.
ZIP: 94105-1492
COMPUTER READABLE FORM:
MEDIUM TYPE: floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.24
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/09/189,607
FILING DATE:
CLASSIFICATION:
PRIOR APPLICATION DATA:
APPLICATION NUMBER: 08/660,289
FILING DATE:
PRIOR APPLICATION DATA:
APPLICATION NUMBER: 08/327,690
FILING DATE:
PRIOR APPLICATION DATA:
APPLICATION NUMBER: 08/065,725
FILING DATE: 21-MAY-1993
CLASSIFICATION:
PRIOR APPLICATION DATA:
APPLICATION NUMBER: 07/662,920
FILING DATE: 28-FEB-1991
ATTORNEY/AGENT INFORMATION:
NAME: Parmelee, Steven W.
REGISTRATION NUMBER: 31,990
REFERENCE/DOCKET NUMBER: 13952-8-4
TELECOMMUNICATION INFORMATION:
TELEPHONE: 206-467-9600
TELEFAX: 415-543-5043
INFORMATION FOR SEQ ID NO: 2:
SEQUENCE CHARACTERISTICS:
LENGTH: 444 amino acids
TYPE: amino acid
TOPOLOGY: linear
MOLECULE TYPE: protein
US-09-189-607-2

Query Match 33.7%; Score 783; DB 3; Length 444;
Best Local Similarity 38.8%; Pred. No. 5,6e-59;
Matches 164; Conservative 76; Mismatches 147; Indels 36; Gaps 10;

QY 1 ANSPLEELHNSLEBCEIEICDFEAKKIFQNVDDTLAFMSKXNDGQCLVPLEHPCA 60
DB 39 ANATLEELRPGSLERCKEBOCCFEEARERIFDARERKLFWSISDQC-----AS 90
QY 61 SLCCGHGTCIDIGSFSCDCRSGBEGRFQ-REVSFLNCSLDNGGCTHYCLEBGMWR-C 118
DB 91 SPQNGSGCKDQLOSTYICFCIPAFEGANCETHKDQILCVNENGGEQYCSHGTGKSC 150
QY 119 SCAPGYKLDLLOCHPAVKEPCGRPWKMKRSHLKRTDEQDQVDPRLDGKTR 178
DB 151 RCHBYSILADGVSCTPTVEYFCGK-IPLEKRNA-----SKPGRIVGKVCPR 199
QY 179 GDSFWQVLLDSKKKLAGAVLIHPSWVLTAAHMCDESK---KLIVRAGEYDRLRWKWE 235
DB 200 GECFQVLLLVNGAQL-CGGTLINTWVSAAHCEDEKIKMNRNLAVLEHDSHSDGE 258
QY 236 LDLDKEVFNHNPVSKSTTNDIALHLAQPATLSQITVPCIPDSGLAEREINQAGQET 295
DB 259 QSRVAVIIPSTYVPGTTNHDIALRLHQPVVLTLDHVPVLCIPERTSERTLAFV-RFS 317

QY 296 LVTGMYHSREKAEKRNRTFVNLFIKIPVPHNECSEVM-----SNMVSNNLCAIGLG 350
 DB 318 LVSGWQLDNRGATA-----LELMVNLVPRMLMTQDLQOSKXGDSFNITEFMCAGYSD 372
 QY 351 DRQACBGDSGGPMVASFHGTWFLVGVSGGGLNHYVYTKSRILMDIHGIRDX 410
 DB 373 GSKOSCKDGGPMHATYRGTYTLTGIVSGGCAVGHFGVYRVSOYLEMLQKLMRSE 432
 QY 411 EAP 413
 DB 433 PRP 435

RESULT 52

US-09-378-907-2
 Sequence 2, Application US/09378907
 Patent No. 6183743
 GENERAL INFORMATION:
 APPLICANT: Hart, Charles E.
 APPLICANT: Petersen, Lars C.
 APPLICANT: Hedner, Ulla
 APPLICANT: Rasmussen, Mirella E.
 TITLE OF INVENTION: Modified Factor VII
 NUMBER OF SEQUENCES: 4
 CORRESPONDENCE ADDRESS:
 ADDRESSEE: Zymogenetics, Inc.
 STREET: 1201 Eastlake Avenue East
 CITY: Seattle
 STATE: WA
 COUNTRY: USA
 ZIP: 98102
 COMPUTER READABLE FORM:
 MEDIUM TYPE: Floppy disk
 OPERATING SYSTEM: IBM PC compatible
 SOFTWARE: Pacentrin Release #1.24
 CURRENT APPLICATION DATA:
 APPLICATION NUMBER: US/09/378,907
 FILING DATE:
 CLASSIFICATION:
 PRIOR APPLICATION DATA:
 APPLICATION NUMBER: 08/871,003
 FILING DATE:
 CLASSIFICATION:
 ATTORNEY/AGENT INFORMATION:
 NAME: Sawislak, Deborah A.
 REGISTRATION NUMBER: 37,438
 REFERENCE/DOCKET NUMBER: 90-0707
 INFORMATION FOR SEQ ID NO: 2:
 SEQUENCE CHARACTERISTICS:
 LENGTH: 444 amino acids
 TYPE: amino acid
 TOPOLOGY: linear
 MOLECULE TYPE: protein
 US-09-378-907-2

Query Match 33.7%; Score 783; DB 3; Length 444;
 Best Local Similarity 38.8%; Pred. No. 5,6e-59;
 Matches 144; Conservative 76; Mismatches 147; Indels 36; Gaps 10;

QY 1 ANSPFELRHSSLRRCIEICDPEBAKEIFQVNDTLAFMSKAYVDQCLVPLEHPCA 60
 DB 39 ANAFLELRPSGLRERCKEEOCSFEAREIFPKAERTKLFMISYSDGOC-----AS 90
 QY 61 SLCCGHCICIDIGISGSCDRSGMGRPCQ-REVSFLNCSLDNGCTHYCLBEVGR-C 118
 DB 91 SPQONGSCXQQLQSLTICFLPAFBRNCETHKDDLLCVNENGGCGYCSHGTGKSC 150
 QY 119 SCAPGYKLGDDLLQCHPAVFPQGRPWKMEKRSKRLKRTDEDDQYDPRLLDGKMTTR 178
 DB 151 RCHBGYSLLABGVSCPTVAYPCGK-IPILEKNA-----SKQGRITVGRVCPK 199
 QY 179 GSPFQVYVLDLKKKLAACAVLIHSWVLTNACWDESK---KLVPLRGYDLRMEKRE 235

DB 200 GECPMQVILLVWGAQO--CGGLTINTIWWVSAACFDKIKNRNLIIVATGHDLSHDDGE 258
 QY 236 LDDLDKEVFPYHNSSTTDNDIALHLAPATLSQTVIPICLDSGLARELNQAQGET 295
 DB 259 QSRRAQVLTIPSTYVGTGTHNHDIALRLHQPVVLTDDHVPCLPERFSERTLAFF-NFS 317
 QY 296 LVTGMYHSREKAEKRNRTFVNLFIKIPVPHNECSEVM-----SNMVSNNLCAIGLG 350
 DB 318 LVSGWQLDNRGATA-----LELMVNLVPRMLMTQDLQOSKXGDSFNITEFMCAGYSD 372
 QY 351 DRQACBGDSGGPMVASFHGTWFLVGVSGGGLNHYVYTKSRILMDIHGIRDX 410
 DB 373 GSKOSCKDGGPMHATYRGTYTLTGIVSGGCAVGHFGVYRVSOYLEMLQKLMRSE 432
 QY 411 EAP 413
 DB 433 PRP 435

RESULT 53

PCT-US94-05779-2
 Sequence 2, Application PC/TUS9405779
 GENERAL INFORMATION:
 APPLICANT:
 TITLE OF INVENTION: Modified Factor VII
 NUMBER OF SEQUENCES: 4
 COMPUTER READABLE FORM:
 MEDIUM TYPE: Floppy disk
 COMPUTER: IBM PC compatible
 OPERATING SYSTEM: PC-DOS/MS-DOS
 SOFTWARE: Patentrin Release #1.0, Version #1.25
 CURRENT APPLICATION DATA:
 APPLICATION NUMBER: PCT/US94/05779
 FILING DATE: 23-MAY-1994
 CLASSIFICATION:
 PRIOR APPLICATION DATA:
 APPLICATION NUMBER: US 08/065,725
 FILING DATE: 21-MAY-1993
 PRIOR APPLICATION DATA:
 APPLICATION NUMBER: US 07/662,920
 FILING DATE: 28-FEB-1991
 ATTORNEY/AGENT INFORMATION:
 NAME: Parmelee, Steven W.
 REGISTRATION NUMBER: 31,990
 REFERENCE/DOCKET NUMBER: 13952-8-1PC
 TELECOMMUNICATION INFORMATION:
 TELEPHONE: 206-467-9600
 TELEFAX: 415-543-5043
 INFORMATION FOR SEQ ID NO: 2:
 SEQUENCE CHARACTERISTICS:
 LENGTH: 444 amino acids
 TYPE: amino acid
 TOPOLOGY: linear
 MOLECULE TYPE: protein
 PCT-US94-05779-2

Query Match 33.7%; Score 783; DB 5; Length 444;
 Best Local Similarity 38.8%; Pred. No. 5,6e-59;
 Matches 164; Conservative 76; Mismatches 147; Indels 36; Gaps 10;

QY 1 ANSPFELRHSSLRRCIEICDPEBAKEIFQVNDTLAFMSKAYVDQCLVPLEHPCA 60
 DB 39 ANAFLELRPSGLRERCKEEOCSFEAREIFPKAERTKLFMISYSDGOC-----AS 90
 QY 61 SLCCGHCICIDIGISGSCDRSGMGRPCQ-REVSFLNCSLDNGCTHYCLBEVGR-C 118
 DB 91 SPQONGSCXQQLQSLTICFLPAFBRNCETHKDDLLCVNENGGCGYCSHGTGKSC 150
 QY 119 SCAPGYKLGDDLLQCHPAVFPQGRPWKMEKRSKRLKRTDEDDQYDPRLLDGKMTTR 178
 DB 151 RCHBGYSLLABGVSCPTVAYPCGK-IPILEKNA-----SKQGRITVGRVCPK 199


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FILING DATE: 27-MAR-1997
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 60/036,205
FILING DATE: 27-JAN-1997
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 60/035,920
FILING DATE: 22-JAN-1997
ATTORNEY/AGENT INFORMATION:
NAME: Hibler, David W.
REGISTRATION NUMBER: 41,071
REFERENCE/DOCKET NUMBER: UTSD:536
TELECOMMUNICATION INFORMATION:
TELEPHONE: 512/418-3000
TELEFAX: 512/474-7577
INFORMATION FOR SEQ ID NO: 14:
SEQUENCE CHARACTERISTICS:
LENGTH: 466 amino acids
TYPE: amino acid
STRANDEDNESS:
TOPOLOGY: linear
US-09-009-217-14

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Query Match 33.7%; Score 783; DB 3; Length 466;
Best Local Similarity 38.8%; Pred. No. 6e-59;
Matches 164; Conservative 76; Mismatches 147; Indels 36; Gaps 10;

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QY 1 ANSFLBELRHSLSRECEIEICDFEBAKEIFQVNDTLAFWSXHDGQCLVPLEHPCA 60
DB 61 ANAFLELAPSLRERCKEQCFEABEIKFQABRTKLFMISYSDQC-----AS 112
QY 61 SLCCGHTCIDGIGSFSCDCRSMEGRFCQ-REVSFLNCSLDNGGCTHYCLEEVGMR-C 118
DB 113 SPQNGSGCKDQLOSTICFLPAFEGNCEHCKDQLCVNEGSGEQYCSDHGTGRSC 172
QY 119 SCAPGYKLDGDLQCHPAKFPQGRPKMEKESHLKRTDEQDQVDPRLIDGKMTTR 178
DB 173 RCHGYSGLADSVSCTPVEYPCGK-IPLLEKRNA-----SKPGGRVGGKVCCK 221
QY 179 GDSFMQVLLDSKKKLAGAVLHPSPVTLTAHGMDESK---KLIVRLGEYDILRMEKE 235
DB 222 GECPQVULLVNGAQL-CGTLINTVWSAAHCFDKIKWRMLIVLGEHDLSEHDGE 280
QY 236 LDLDKEVFPHPNYSKSTINDIALHLAQPATLSQTIYVCLPDSGLARELNOAGET 295
DB 281 QSRVAQVITPSTYVPGTTNHDILALRLHQPVLTDHVPCLPRTPTSEKTLAFV-RFS 339
QY 236 LVTGNGYHSREKEAKRRTFVNFIKIPVPHNCESEV-----SNWVSENMLCAGILG 350
DB 340 LVSGWGLLDRGATA-----LELMVNLVPRMTODCLQOSRKYGDSPTITEYMFCAGYSD 394
QY 351 DRQACBGDSGGPMVASPHGTWFLVGVMSGCGGLLHNVGYTVKYSRYLDMHGHTRDK 410
DB 395 GSKDSCBGDSGGPHATHYRGWTLGTIVSGGCAVGHGVTTRVSQYLEWLOKMRSE 454
QY 411 EAP 413
DB 455 PRP 457

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RESULT 58
US-09-009-656-14
Sequence 14, Application US/0909656
GENERAL INFORMATION:
PATENT NO. 6132730
APPLICANT: Thorpe, Philip E.
APPLICANT: King, Steven W.
APPLICANT: Gao, Benling
TITLE OF INVENTION: COMBINED TISSUE FACTOR AND FACTOR VIIA
TITLE OF INVENTION: METHODS AND COMPOSITIONS FOR COAGULATION AND TUMOR
NUMBER OF SEQUENCES: 27
CORRESPONDENCE ADDRESS:
ADDRESS: Arnold, White & Durkee

```

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STREET: P.O. Box 4433
CITY: Houston
STATE: Texas
COUNTRY: USA
ZIP: 77210
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/09/009,656
FILING DATE: Concurrently Herewith
CLASSIFICATION:
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 60/042,427
FILING DATE: 27-MAR-1997
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 60/036,205
FILING DATE: 27-JAN-1997
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 60/035,920
FILING DATE: 22-JAN-1997
ATTORNEY/AGENT INFORMATION:
NAME: Hibler, David W.
REGISTRATION NUMBER: 41,071
REFERENCE/DOCKET NUMBER: UTSD:537
TELECOMMUNICATION INFORMATION:
TELEPHONE: 512/418-3000
TELEFAX: 512/474-7577
INFORMATION FOR SEQ ID NO: 14:
SEQUENCE CHARACTERISTICS:
LENGTH: 466 amino acids
TYPE: amino acid
STRANDEDNESS:
TOPOLOGY: linear
US-09-009-656-14

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Query Match 33.7%; Score 783; DB 3; Length 466;
Best Local Similarity 38.8%; Pred. No. 6e-59;
Matches 164; Conservative 76; Mismatches 147; Indels 36; Gaps 10;

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QY 1 ANSFLBELRHSLSRECEIEICDFEBAKEIFQVNDTLAFWSXHDGQCLVPLEHPCA 60
DB 61 ANAFLELAPSLRERCKEQCFEABEIKFQABRTKLFMISYSDQC-----AS 112
QY 61 SLCCGHTCIDGIGSFSCDCRSMEGRFCQ-REVSFLNCSLDNGGCTHYCLEEVGMR-C 118
DB 113 SPQNGSGCKDQLOSTICFLPAFEGNCEHCKDQLCVNEGSGEQYCSDHGTGRSC 172
QY 119 SCAPGYKLDGDLQCHPAKFPQGRPKMEKESHLKRTDEQDQVDPRLIDGKMTTR 178
DB 173 RCHGYSGLADSVSCTPVEYPCGK-IPLLEKRNA-----SKPGGRVGGKVCCK 221
QY 236 LDLDKEVFPHPNYSKSTINDIALHLAQPATLSQTIYVCLPDSGLARELNOAGET 295
DB 281 QSRVAQVITPSTYVPGTTNHDILALRLHQPVLTDHVPCLPRTPTSEKTLAFV-RFS 339
QY 236 LVTGNGYHSREKEAKRRTFVNFIKIPVPHNCESEV-----SNWVSENMLCAGILG 350
DB 340 LVSGWGLLDRGATA-----LELMVNLVPRMTODCLQOSRKYGDSPTITEYMFCAGYSD 394
QY 351 DRQACBGDSGGPMVASPHGTWFLVGVMSGCGGLLHNVGYTVKYSRYLDMHGHTRDK 410
DB 395 GSKDSCBGDSGGPHATHYRGWTLGTIVSGGCAVGHGVTTRVSQYLEWLOKMRSE 454
QY 411 EAP 413
DB 455 PRP 457

```

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RESULT 59
PCT-US93-04493-4
Sequence 4, Application PCT/US9304493
GENERAL INFORMATION:
APPLICANT: Morrissey, James H.
APPLICANT: Comp, Philip C.
TITLE OF INVENTION: Truncated Tissue Factor and FvIIa or
TITLE OF INVENTION: FvII Activator for Blood Coagulation
NUMBER OF SEQUENCES: 4
CORRESPONDENCE ADDRESS:
ADDRESSEE: R. Charles, Medlock & Andrews
STREET: 1201 Elm Street, Suite 4500
CITY: Dallas
STATE: Texas
COUNTRY: US
ZIP: 75270-2197
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patent in Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: PCT/US93/04493
FILING DATE: 19930512
CLASSIFICATION:
PRIORITY APPLICATION DATA:
APPLICATION NUMBER: US 07/882202
FILING DATE: 13-MAY-1992
PRIORITY APPLICATION DATA:
APPLICATION NUMBER: US 08/021615
FILING DATE: 19-FEB-1993
ATTORNEY/AGENT INFORMATION:
NAME: Tujillo, Doreen Y.
REGISTRATION NUMBER: 35,719
REFERENCE/DOCKET NUMBER: OMRF B34290CIPC/PCT
TELECOMMUNICATION INFORMATION:
TELEPHONE: 214-939-4500
TELEFAX: 214-939-4500
INFORMATION FOR SEQ ID NO: 4:
SEQUENCE CHARACTERISTICS:
LENGTH: 466 amino acids
TYPE: AMINO ACID
TOPOLOGY: linear
MOLECULE TYPE: protein
PCT-US93-04493-4

Query Match 33.7%; Score 783; DB 5; Length 466;
Best Local Similarity 38.8%; Pred. No. 6e-59;
Matches 164; Conservative 76; Mismatches 147; Indels 36; Gaps 10;

QY 1 ANSFEELRHSSLEERCIEICDEPEAKETEQVNDOTLAFWKSKVNDQGVLPLEHCA 50
DB 61 AANAFELRPSLEKCEKBEQCSFEARBEIFKAEKTKLFIISDDQC-----AS 112
QY 61 SLCCGHTCIDIGISFCDCRSWGECFCQ-REVSFLNCSLDNGCTHYCLAEVGR-C 118
DB 113 SPCQNGSCCKDQLOSTICFLPAFEGNCFTHDDQLCVNENGCQYSDHGTGKSC 172
QY 119 SCAPRYKLGDDLLQCHPAVFCPCGFWKMEKRSKSLKADTEDEDDVBRLLDGKMR 178
DB 173 RHEBYSLADGVSCPTVEYPCGK-IPILKENA-----SKQGRIVGKVCPK 221
QY 179 GSPQVQVLLDSSKKLACGAVLHPSWVLTAAQCMESK---KLIVLGGYIDRRMEKE 235
DB 222 GECPOVLLVNHQNL-CGTLINTVWSAHACPKLNNRNLIAVLGSHDISHDGD 280
QY 236 LLDLKEVFNPNYSKSTNDIALHLAQPATLSQTIPTCLPDSGLARELNDAQGT 295
DB 281 GSRVAQVLIPTVGTNNHDIALLRLHQPVVLTDDHVPLCLPERSERTLAFLV-RFS 339
QY 296 LVTVNGYHSSEKAKRNTFYVANKIPVPHNECSFM-----SNVSENNLCAGILG 350
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DB 340 LVSGWGLDRLRGATA-----LEIMVNLVPRILMTQDCLQSKRKVEDSPNITEMFCAGYSD 394
QY 351 DQDACBGDSGGMVASHFHTWFLVGLVSWGCGGLHANYGYTKRSRYLDWIHGIHDK 410
DB 395 GSKDCCKGDSGDPHATHRGRTWYLVGVSWGCGCATVGHFGVYTRVSQYLEWLDKMESE 454
QY 411 EAP 413
DB 455 PRP 457

RESULT 60
US-08-487-037-2
Sequence 2, Application US/08487037
Patent No. 5793863
GENERAL INFORMATION:
APPLICANT: Wolf, David L.
TITLE OF INVENTION: RECOMBINANT AGENTS AFFECTING THROMBOSIS
NUMBER OF SEQUENCES: 11
CORRESPONDENCE ADDRESS:
ADDRESSEE: MORRISON & FORSTER
STREET: 2000 Pennsylvania Avenue, NW
CITY: Washington
STATE: DC
COUNTRY: USA
ZIP: 20006-1812
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patent in Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/487,037
FILING DATE: 07-JUN-1995
CLASSIFICATION: 514
ATTORNEY/AGENT INFORMATION:
NAME: Adler, Reid G.
REGISTRATION NUMBER: 30,988
REFERENCE/DOCKET NUMBER: 2803-0002.02
TELECOMMUNICATION INFORMATION:
TELEPHONE: (202) 887-1500
TELEFAX: (202) 887-0763
INFORMATION FOR SEQ ID NO: 2:
SEQUENCE CHARACTERISTICS:
LENGTH: 437 amino acids
TYPE: amino acid
STRANDEDNESS: single
TOPOLOGY: both
FEATURE:
NAME/KEY: Protein
LOCATION: 1..139
OTHER INFORMATION: /note= "Factor Ka-Light Chain"
FEATURE:
NAME/KEY: Peptide
LOCATION: -40..0
OTHER INFORMATION: /note= "Pre-Pro leader sequence"
FEATURE:
NAME/KEY: Modified-site
LOCATION: -17
OTHER INFORMATION: /note= "Location of Intron A"
FEATURE:
NAME/KEY: Modified-site
LOCATION: (37*38)
OTHER INFORMATION: /note= "Location of Intron B"
FEATURE:
NAME/KEY: Modified-site
LOCATION: 46
OTHER INFORMATION: /note= "Location of Intron C"
FEATURE:
NAME/KEY: Modified-site
LOCATION: 63
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; OTHER INFORMATION: /note= "An amino acid represented
; OTHER INFORMATION: by the greek letter Beta"
; FEATURE:
; NAME/KEY: Modified-site
; LOCATION: 84
; OTHER INFORMATION: /note= "Location of Intron D"
; FEATURE:
; NAME/KEY: Modified-site
; LOCATION: 128
; OTHER INFORMATION: /note= "Location of Intron E"
; FEATURE:
; NAME/KEY: Modified-site
; LOCATION: (158,159)
; OTHER INFORMATION: /note= "Location of Intron F"
; FEATURE:
; NAME/KEY: Modified-site
; LOCATION: 198
; OTHER INFORMATION: /note= "Location of Intron G"
; FEATURE:
; NAME/KEY: Disulfide-bond
; LOCATION: ground(17..22, 50..61, 55..70, 72..81, 89..100, 96
; LOCATION: ..109, 111..124, 132..251, 150..155, 170..186,
; LOCATION: 299..313, 324..352)
; US-08-487-037-2

Query Match 32.3%; Score 749.5; DB 1; Length 437;
Best Local Similarity 35.6%; Pred. No. 4,1e-56;
Matches 150; Conservative 82; Mismatches 154; Indels 35; Gaps 8;

QY 1 ANSPLEELHSHSLRECEIEICDFEPAKEIFQVNDTLAFWAKHVDGQCLNPLEHPCA 60
    ||||| : : : : : : : : : : : : : : : : : : : : : : : :
DB 41 ANSFLTKMKGHINRTCMTTTCSYTTARTVFTDSKNTFMKKYKDGQCESTSP----- 94

QY 61 SLCCGHTCIGISFSCDGRSGMGRFCQREYVFLNCSLNDGCTHCLREYGMWRSCG 120
    ||||| : : : : : : : : : : : : : : : : : : : : : : : :
DB 95 --CQNGCKCKGLBYCTCTLBGFBNKCE-LTRKL-CSLDNGDDCFCHBNQSVVCSG 151

QY 121 APGYKGDILLQCHPAKFPQGRPWMEKRSKLRKDEDEQDVDFRLIDSKMTRRGD 180
    ||||| : : : : : : : : : : : : : : : : : : : : : : : :
DB 152 ARGVTLADNGKACIPTGPYCGK--QTLERRK-----RIVGQBECKDE 194

QY 181 SPQVVLDSKKGLACAVLIHESVYLTAAHMDSEKLLVNLGEYDLRMEKELDLDI 240
    ||||| : : : : : : : : : : : : : : : : : : : : : : : :
DB 195 CPWQALLINEENEGCGGTILSEFYILTPAACLVAQAFYEVYVGRNTEDEGGEAVHEV 254

QY 241 KEVFEVHPNYSKSTTDNIALHLAQPATLSQITVPLDPSGLARELNAGQET-LVNG 299
    ||||| : : : : : : : : : : : : : : : : : : : : : : : :
DB 255 EVVTKNRPFTKETIDFDIAVLRKLTPTIFRNANVAPACLPRMAASTL--MTQRTGISVG 312

QY 300 WGYHSSREKAEKRNTEVNLFIKIPVAPHNECSEVMNWSNMLCAGILGDRQDACEG 359
    ||||| : : : : : : : : : : : : : : : : : : : : : : : :
DB 313 FGRHEKRGSTR-----LMTLEVPYVDRNSCKLSSFITLQMFCAQYDIKQEDAOQGD 367

QY 360 SGGPMYASPHGTWFLVGLVNGSGCLLHNGVTTKYSRLMLHGHIRDEKAPQ-KSMA 418
    ||||| : : : : : : : : : : : : : : : : : : : : : : : :
DB 368 SGGHYVTRKQTYFVLTGISWBGCKRKGKGIYTKYLAFLKWDIMSKTGLPKAKSHA 427

QY 419 P 419
DB 428 P 428

RESULT 61
US-08-487-037-1
; Sequence 1, Application US/08487037
; Patent No. 5795863
; GENERAL INFORMATION:
; APPLICANT: Wolf, David L.
; TITLE OF INVENTION: RECOMBINANT AGENTS AFFECTING THROMBOSIS
; NUMBER OF SEQUENCES: 11
; CORRESPONDENCE ADDRESSES:
; ADDRESSEE: MORRISON & FOERSTER
; STREET: 2000 Pennsylvania Avenue, NW
```

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; CITY: Washington
; STATE: DC
; COUNTRY: USA
; ZIP: 20006-1812
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: Patent Release #1.0, Version #1.30
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/487,037
; FILING DATE: 07-JUN-1995
; CLASSIFICATION: 514
; ATTORNEY/AGENT INFORMATION:
; NAME: Adler, Reid G.
; REGISTRATION NUMBER: 30,988
; REFERENCE/DOCKET NUMBER: 2803-0002.02
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: (202) 887-1500
; TELEFAX: (202) 887-0763
; TELEX: 90-4030
; INFORMATION FOR SEQ ID NO: 1:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 488 amino acids
; TYPE: amino acid
; STRANDEDNESS: single
; TOPOLOGY: both
; FEATURE:
; NAME/KEY: Modified-site
; LOCATION: -17
; OTHER INFORMATION: /note= "Location of Intron A"
; FEATURE:
; NAME/KEY: Modified-site
; LOCATION: (37*38)
; OTHER INFORMATION: /note= "Location of Intron B"
; FEATURE:
; NAME/KEY: Modified-site
; LOCATION: 46
; OTHER INFORMATION: /note= "Location of Intron C"
; FEATURE:
; NAME/KEY: Modified-site
; LOCATION: 63
; OTHER INFORMATION: /note= "Amino acid represented by
; OTHER INFORMATION: the greek letter Beta"
; FEATURE:
; NAME/KEY: Modified-site
; LOCATION: 84
; OTHER INFORMATION: /note= "Location of Intron D"
; FEATURE:
; NAME/KEY: Modified-site
; LOCATION: 128
; OTHER INFORMATION: /note= "Location of Intron E"
; FEATURE:
; NAME/KEY: Modified-site
; LOCATION: (209,210)
; OTHER INFORMATION: /note= "Location of Intron F"
; FEATURE:
; NAME/KEY: Modified-site
; LOCATION: 249
; OTHER INFORMATION: /note= "Location of Intron G"
; FEATURE:
; NAME/KEY: Peptide
; LOCATION: -40..0
; OTHER INFORMATION: /note= "Pre-Pro leader sequence"
; FEATURE:
; NAME/KEY: Protein
; LOCATION: 1..139
; OTHER INFORMATION: /note= "Factor Xa- Light chain"
; FEATURE:
; NAME/KEY: Peptide
; LOCATION: 143..194
; OTHER INFORMATION: /note= "Activation Peptide"
; FEATURE:
```

NAME/KEY: Protein
LOCATION: 195..448
OTHER INFORMATION: /note="Factor Xa-Heavy Chain"
FEATURE:
NAME/KEY: Disulfide-bond
LOCATION: group(17..22, 50..61, 55..70, 72..81, 89..100, 96
LOCATION: ..109, 111..124, 133..302, 201..206, 221..237,
LOCATION: 350..364, 375..403)
US-08-487-037-1

Query Match 32.1%; Score 746; DB 1; Length 488;
Best Local Similarity 33.5%; Pred. No. 9, 2e-56;
Matches 153; Conservative 86; Mismatches 162; Indels 56; Gaps 9;

QY 1 ANSFLLELRHSLSRECEIEICDFEEAKELFQNVDDTLAFSKHNDGQCVLPLEHPCA 60
DB 41 ANSFLLELRHSLSRECEIEICDFEEAKELFQNVDDTLAFSKHNDGQCVLPLEHPCA 60
QY 61 SLCCGSGTCLDGSFSCDCRSGWEGRFQREVSFLNCSLDNGACTHYCLEEVGRRCSC 120
DB 95 --CQNGKCKGGLGEYTCLEEGFEKNCCELFTRL CSLDNGDCQFCHBQNSVVCSC 151
QY 121 APGYLGGDILQCHPAVAFPCGRPMKREKRSKSLKRDTEQED-----QVD 167
DB 152 ARGYLADNGKACITPGPYPCGK--QTLERRKRSVAQATSSGEAPDSITWKPYADADL 209
QY 168 P-----RLIDGKMTREGDSPMQVVLDSKKKLACGAVLIHPS 204
DB 210 PTEPPELDPEQNOBERGDNNTLRIYGGECQDCQCPQMLINENGFQGGTILSEF 269
QY 205 WVLTAHQMDESCKLVLAGEYDLRWEKKEILDIDKEVFNHNSKSTINDIALHLA 264
DB 270 YILTAHCLVQAKRFVAVGDRNTEQEBGEAVHEVVLKHNRFKEIYDIDLAVLRK 329
QY 265 QPALSGTIVPTCLPDSGLARELNQAGET-LVTGCGHSSSEKAKNRTFYVNIKI 323
DB 330 TPIFRNVAPACLERMAESTL--MTQKTIAGFGRCHERGRST-----LKMLEV 382
QY 324 PVVHNCSFVNSNMVSENLCAGILGRDQCBEDSGSPVVASPHGTPLVGLVMSGE 383
DB 383 PVVHNCSKSSSFIITQMFCAGITKQEDACQDSGSPVTRFDOTIFVGLVMSGE 442
QY 384 CGLHNYGVYTKVSRYLDMIGHILRDEKAPQ-KSWAP 419
DB 443 CARCKYGIYTKVLAFLKMDRSMKTKGLPKXKSHAP 479

RESULT 62
US-08-073-531B-1
Sequence 1, Application US/08073531B
Patent No. 5621039
GENERAL INFORMATION:
APPLICANT: Hallahan, et al.
TITLE OF INVENTION: Factor IX - Polymeric Conjugates
NUMBER OF SEQUENCES: 1
CORRESPONDENCE ADDRESS:
ADDRESSES: GALGANO & BURKE
STREET: 300 Rabro Drive
CITY: Hauppauge
STATE: New York
COUNTRY: USA
ZIP: 11788
COMPUTER READABLE FORM:
MEDIUM TYPE: Diskette, 3.50 inch, 1.44 MB Storage
COMPUTER: IBM Compatible
OPERATING SYSTEM: DOS 6.0
SOFTWARE: WordPerfect 6.1
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/073, 531B
FILING DATE: June 8, 1993
CLASSIFICATION: 525
PRIOR APPLICATION DATA:
APPLICATION NUMBER: -

FILING DATE: -
ATTORNEY/AGENT INFORMATION:
NAME: GALGANO & BURKE
REGISTRATION NUMBER: 30,735
REFERENCE/DOCKET NUMBER: 128-7
TELECOMMUNICATION INFORMATION:
TELEPHONE: (516) 582-6161
TELEFAX: (516) 582-6191
INFORMATION FOR SEQ ID NO: 1:
SEQUENCE CHARACTERISTICS:
LENGTH: 415 Amino Acids
TYPE: Amino Acid
STRANDEDNESS: Single
TOPOLOGY: Unknown to applicant
MOLECULE TYPE: -
HYPOTHETICAL: -
ANTI-SENSE: -
ORIGINAL SOURCE:
ORGANISM: -
INDIVIDUAL ISOLATE: -
CELL TYPE: -
IMMEDIATE SOURCE:
LIBRARY:
PUBLICATION INFORMATION:
AUTHORS:
TITLE:
JOURNAL:
VOLUME:
ISSUE:
PAGES:
DATE:
RELEVANT RESIDUES IN SEQ ID NO: 1: FROM 1 TO 415.

Query Match 31.9%; Score 742; DB 1; Length 415;
Best Local Similarity 35.8%; Pred. No. 1, 7e-55;
Matches 152; Conservative 69; Mismatches 156; Indels 48; Gaps 10;

QY 5 LELIHSLSRECEIEICDFEEAKELFQNVDDTLAFSKHNDGQCVLPLEHPCA 64
DB 6 LEEFVGNLEERECMEKCSFEAREVENTKTEFEKQYVDGQCSNF-----CL 57
QY 65 GAGTCLDGSFSCDCRSGWEGRFQREVSFLNCSLDNGACTHYCLEEVGR-RCSGAP 123
DB 58 NGSCKCDINSYECWCPFGFEKNCCELDT---CNKNGCEGCKSANKNYVCSCTEG 114
QY 124 YKLGDDILQCHPAVAFPCGRPMKREKRSKSLKRDTEQEDQVD----- 168
DB 115 YRLANQKSCFPAVPPFCGRVSVQTSKLTGRAVFPD-VVYVPTFAETILDNITQTE 173
QY 169 -----RLIDGKMTREGDSPMQVVLDSKKKLACGAVLIHPSWVLTAHQMDESCKLVR 222
DB 174 SPNDFTRVGGEDAKFGQFPQVVLNGKYDAFCGGSIVNEKVIYLAHCVETGVKITV 232
QY 223 LGEYDLRWEKKEILDIDKEVFNHNSKST--DNIDIALHLAQAPTLSQITVPTCLPD 280
DB 233 AGEHNIETETBEQKRVIRIIPHNVAALINCNNDIALLEDEPLVNLVSYYTPICLAD 292
QY 281 SGLARELNQAGETLVYTGW--YHSSREKAKRNTFYVNIKI PVVHNCSFVNSNM 338
DB 293 KEYINIFLKPQ--SGVYSGMRVFKGRS-----ALTELELVPLVDATCLASTYFT 343
QY 339 VSENNMCAGILGRDQCBEDSGSPVVASPHGTPLVGLVMSGCGCLHNYGVYTKVSR 398
DB 344 IYNNMFCAGFHBGRBSCQDSGSPHYTEVGRSFLTGLIISGBCAMKKGKGIYTKVSR 403
QY 399 YLDWI 403
DB 404 YVWMI 408

RESULT 63

US-08-766-288-1
Sequence 1, Application US/08766288
Patent No. 5963040
GENERAL INFORMATION:
APPLICANT: Hallahan, et al.
TITLE OF INVENTION: Factor IX - Polymeric Conjugates
NUMBER OF SEQUENCES: 1
CORRESPONDENCE ADDRESS:
ADDRESSEE: GALGANO & BURKE
STREET: 300 Babro Drive
CITY: Hauppauge
STATE: New York
COUNTRY: USA
ZIP: 11788
COMPUTER READABLE FORM:
MEDIUM TYPE: Diskette, 3.50 inch, 1.44 Mb Storage
COMPUTER: IBM Compatible
OPERATING SYSTEM: DOS 6.0
SOFTWARE: Wordperfect 6.1
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/766,288
FILING DATE:
CLASSIFICATION: 525
PRIOR APPLICATION DATA:
APPLICATION NUMBER: 08/073,531
FILING DATE: June 8, 1993
ATTORNEY/AGENT INFORMATION:
NAME: GALGANO & BURKE
REGISTRATION NUMBER: 30,735
REFERENCE/DOCKET NUMBER: 128-7 (DIV)
TELECOMMUNICATION INFORMATION:
TELEPHONE: (516) 582-6191
TELEFAX: (516) 582-6191
INFORMATION FOR SEQ ID NO: 1:
SEQUENCE CHARACTERISTICS:
LENGTH: 415 Amino Acids
TYPE: Amino Acid
STRANDEDNESS: Single
TOPOLOGY: Unknown to applicant
MOLECULE TYPE:
HYPOTHEetical: -
ANTI-SENSE: -
ORIGINAL SOURCE:
ORGANISM: -
INDIVIDUAL ISOLATE: -
CELL TYPE: -
IMMEDIATE SOURCE:
LIBRARY:
CLONE:
PUBLICATION INFORMATION:
AUTHORS:
TITLE:
TITLE: JOURNAL:
VOLUME:
ISSUE:
PAGES:
DATE:
RELEVANT RESIDUES IN SEQ ID NO: 1: FROM 1 TO 415.
US-08-766-288-1
Query Match 31.9%; Score 742; DB 2; Length 415;
Best Local Similarity 35.8%; Pred. No. 1.7e-55;
Matches 152; Conservative 69; Mismatches 156; Indels 48; Gaps 10;
QY 5 LEEIRKSSLEKCEIIEIDFEAKETIFQVNDTLAFMSKRVGDOQLVPLEHPCASLCC 64
DB 6 LEEFVGNLERCEMEKSCFEEAREVFEVTEKTEPFKQYVGDQCEANP-----CL 57
QY 65 GHGCTIDGSGSCSCRSQWGRFCQREVSFLNSLNGSGCTHYCLEEVGR-RGCGAPG 123
DB 58 NGSCXDDINSYECPCPFGEGNCELDT--CNINQRCRQFCMSADAKVVCSCGTEG 114
QY 124 YKIGDILQCHPAVAFPCGRPMKRMKRSKSHLKDTEDQGDQYDP----- 168

DB 115 YRLAENGKCEPAVFPFGGRVSYSQTSKLTAEAVFPD-VDIYNPLEKPTLINDITGTE 173
QY 169 -----RLDGMTRGDSPMQVVLDSKKIACGAVLHPSVLTAAHCDSESKILVR 222
DB 174 SFNDFRVYGDADAFQGFPMQVYV-LNGKVDAFGGSIVNEKVIYAAHCVETGVKITVV 232
QY 223 LGEYDLRREKNELDLDIKKEFVHPNYSKST--DNIDALHLAQPATLSQTIPTCLDP 280
DB 233 AGEHNIETETHEEQKRVITRIIPHHYNNAINKINHDLIDLEPLVINSVTPICLAD 292
QY 281 SGIAERELNQAQELTYLWNG--YHSSREKAKRRFVINFKIPVPHNECEVSNMA 338
DB 293 KEYNIRIFKFG--SGVSGMGQVFEHGRS-----ALVEYLRVPLVDRATCLRSTFT 343
QY 339 VSENMICAGLIDRDADCEGSGSPVYASFHGTWFLVGLYSRSGGLIHHNYGYTYSR 398
DB 344 IYNNMFCAGHFGGRDSQGDSPGPHYTEVETSLGLIISWBECCMMKMGKGYITTVSR 403
QY 399 YLDWI 403
DB 404 YVWMI 408
RESULT 64
US-08-487-037-3
Sequence 3, Application US/08487037
Patent No. 5795863
GENERAL INFORMATION:
APPLICANT: Wolf, David L.
TITLE OF INVENTION: RECOMBINANT AGENTS AFFECTING THROMBOSIS
NUMBER OF SEQUENCES: 11
CORRESPONDENCE ADDRESS:
ADDRESSEE: MORRISON & ROEBSTER
STREET: 2000 Pennsylvania Avenue, NW
CITY: Washington
STATE: DC
COUNTRY: USA
ZIP: 20006-1812
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/487,037
FILING DATE: 07-JUN-1995
CLASSIFICATION: 514
ATTORNEY/AGENT INFORMATION:
NAME: Adler, Reid G.
REGISTRATION NUMBER: 30,988
REFERENCE/DOCKET NUMBER: 2803-0002.02
TELECOMMUNICATION INFORMATION:
TELEPHONE: (202) 887-1500
TELEFAX: (202) 887-0763
TELEX: 90-4030
INFORMATION FOR SEQ ID NO: 3:
SEQUENCE CHARACTERISTICS:
LENGTH: 437 amino acids
TYPE: amino acid
STRANDEDNESS: single
TOPOLOGY: both
FEATURE:
NAME/KEY: Modified-site
LOCATION: -40..397
OTHER INFORMATION: /note= "Same features apply from
OTHER INFORMATION: SEQ ID NO:2"
FEATURE:
NAME/KEY: Protein
LOCATION: 1..139
OTHER INFORMATION: /note= "Factor Xa - light chain"
NAME/KEY: Peptide

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LOCATION: -40..0
OTHER INFORMATION: /note= "Pre-Pro leader sequence"
FEATURE:
NAME/KEY: Modified-site
LOCATION: -17
OTHER INFORMATION: /note= "Location of Intron A"
FEATURE:
NAME/KEY: Modified-site
LOCATION: (3738)
OTHER INFORMATION: /note= "Location of Intron B"
FEATURE:
NAME/KEY: Modified-site
LOCATION: 46
OTHER INFORMATION: /note= "Location of Intron C"
FEATURE:
NAME/KEY: Modified-site
LOCATION: 63
OTHER INFORMATION: /note= "An amino acid represented
OTHER INFORMATION: by the greek letter Beta"
FEATURE:
NAME/KEY: Modified-site
LOCATION: 84
OTHER INFORMATION: /note= "Location of Intron D"
FEATURE:
NAME/KEY: Modified-site
LOCATION: (158*159)
OTHER INFORMATION: /note= "Location of Intron P"
FEATURE:
NAME/KEY: Modified-site
LOCATION: 198
OTHER INFORMATION: /note= "Location of Intron G"
FEATURE:
NAME/KEY: Disulfide-bond
LOCATION: group(17..22, 50..61, 55..70, 72..81, 89..100, 96
LOCATION: ..109, 111..124, 132..251, 150..155, 170..186,
LOCATION: ..299..313, 324..352)
US-08-487-037-3
```

Query Match 31.9%; Score 741.5; DB 1; Length 437;
Best Local Similarity 35.2%; Pred. No. 2e-55;
Matches 148; Conservative 84; Mismatches 154; Indels 35; Gaps 8;

```
QY 1 ANSPLELRHSLEECIEICDPEEAKELPQNVDDTLAFWSKHVDQCLVPLPHPCA 60
||| : : : : : : : : : : : : : : : : : : : : : : : : : :
DB 41 ANSFLTKKKGHLTRTCWTTTOSYTAFTVTDSDXTMFPNKKYGGDCCENP----- 94
||| : : : : : : : : : : : : : : : : : : : : : : : : : :
QY 61 SLCCGCTCIDIGSFCDCGSGWGRFCQREVSFLNCSLDNGCCTHYCLEEYKRCSC 120
||| : : : : : : : : : : : : : : : : : : : : : : : : : :
DB 95 --CQNGKCKKGEGEYTCLEGEFGKNCLEFTRKL--CSLNGDCDQFCHESQNSVYSC 151
||| : : : : : : : : : : : : : : : : : : : : : : : : : :
QY 121 APGYLGDLLQCHPAVKFPCGRPMKMEKKSHLKRDTEDQDVDPRLDGKMTRRGD 180
||| : : : : : : : : : : : : : : : : : : : : : : : : : :
DB 152 AAGTYLADNGKACLPFGYPCSK--QTLERK-----RIVGGQCKGGE 194
||| : : : : : : : : : : : : : : : : : : : : : : : : : :
QY 181 SPWQVLLDSKKLACGAVLHPSPVLTAAHCDKSKLLVRLGEYDLRRKRWELDI 240
||| : : : : : : : : : : : : : : : : : : : : : : : : : :
DB 195 CPWQALLINENBFGCGTILSEFYLLTAACHLYAKRKYRVADRTEQEGGAVHEV 254
||| : : : : : : : : : : : : : : : : : : : : : : : : : :
QY 241 KEVFVHYVASTTDNDLLHQAQATLSQITVPCPDGSLAEKLINQAGET-LVTS 299
||| : : : : : : : : : : : : : : : : : : : : : : : : : :
DB 255 EVVINGNFTETEDNIAVRLKTPITFPMNNAAPACPEEDMESTL--WTKGIVSG 312
||| : : : : : : : : : : : : : : : : : : : : : : : : : :
QY 300 WGHSSREKEAKNRTFVNFILKIPVPHNECEVSNMVSNNMCAGLIGRQDACEGD 359
||| : : : : : : : : : : : : : : : : : : : : : : : : : :
DB 313 FGRTEKRGOSTR-----LKMLEVPYDRNSCLSSFTITQNFCAGYDTQEDACGD 367
||| : : : : : : : : : : : : : : : : : : : : : : : : : :
QY 360 SGGPVAASFGTWTIVGLVSGEGGLAHNYGYTTKVSRYLDWTHGIRKAPQ-KSMA 418
||| : : : : : : : : : : : : : : : : : : : : : : : : : :
DB 368 AAGPHTVTKDTYFVGLVSGEGGAKKGYTYTVAALFKWIDSMKTRGLPRAKSHA 427
||| : : : : : : : : : : : : : : : : : : : : : : : : : :
QY 419 P 419
DB 428 P 428
```

```
RESULT 65
5521070-2
; Patent No. 5521070
; APPLICANT: MELITEN, PIERRE
; TITLE OF INVENTION: DNA SEQUENCE CODING FOR HUMAN FACTOR
; IX OR A SIMILAR PROTEIN, EXPRESSION VECTOR, TRANSFORMED CELLS,
; METHOD FOR PREPARING FACTOR IX AND CORRESPONDING PRODUCTS OBTAINED
; NUMBER OF SEQUENCES: 6
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/209,489
; FILING DATE: 14-MAR-1994
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: 970,966
; FILING DATE: 03-NOV-1992
; APPLICATION NUMBER: 433,276
; FILING DATE: 08-NOV-1989
; SEQ ID NO:2:
; LENGTH: 461
5521070-2
```

Query Match 31.7%; Score 736.5; DB 6; Length 461;
Best Local Similarity 35.7%; Pred. No. 5.ee-55;
Matches 153; Conservative 72; Mismatches 157; Indels 47; Gaps 11;

```
QY 1 ANS-FLLELRHSLEECIEICDPEEAKELPQNVDDTLAFWSKHVDQCLVPLPHPCA 59
||| : : : : : : : : : : : : : : : : : : : : : : : : : :
DB 47 ANSGLLEFVGNLEBCEKSCFEAREVFEHTERTFVKQYVGDCCENP----- 101
||| : : : : : : : : : : : : : : : : : : : : : : : : : :
QY 60 ASLCCGCTCIDIGSFCDCGSGWGRFCQREVSFLNCSLDNGCCTHYCLEEYKRC-RC 118
||| : : : : : : : : : : : : : : : : : : : : : : : : : :
DB 102 ---CLNGSCDDIDNSYBCCFPGFGKNCLEDTV---CNINRGCRQPKNSADKKVVC 155
||| : : : : : : : : : : : : : : : : : : : : : : : : : :
QY 119 SCAPGYKADLLQCHPAVKFPCGRPMKMEKKSHLKR-----DTEDQDVDD--- 167
||| : : : : : : : : : : : : : : : : : : : : : : : : : :
DB 156 SCTEGYRLAENQKSCBPAVFPQGRVSVQTSKLTAKTVPEVDVYNSTEAETIINDIT 215
||| : : : : : : : : : : : : : : : : : : : : : : : : : :
QY 168 -----PRLDGKMTRRGDSPWQVLLDSKKLACGAVLHPSPVLTAAHCDKSK 218
||| : : : : : : : : : : : : : : : : : : : : : : : : : :
DB 216 QSTQSENFDTIVVGGEDAKPGQFPQVY--LNGKYDAFCGGSIVAEKIVTAALCVETGK 274
||| : : : : : : : : : : : : : : : : : : : : : : : : : :
QY 219 LTVRLGEYDLRRKRWELDIKEVFVHYVSNKSTT--DNIDLLHQAQATLSQITVPI 276
||| : : : : : : : : : : : : : : : : : : : : : : : : : :
DB 275 ITVAAGEHNIEBTEHTBQKRVITRIIPHNNYNAINKYNDIALLEDEPLVINSYVPI 334
||| : : : : : : : : : : : : : : : : : : : : : : : : : :
QY 277 CLPDSGLAEKLINQAGETLVYTGW--YHSREKRAKRRTFVNFILKIPVPHNECSEV 334
||| : : : : : : : : : : : : : : : : : : : : : : : : : :
DB 335 CLADKEVYTNIFLKG--SGYVSGWGRVFNHGRS-----ALVQYLVKVPVDRATCLRS 385
||| : : : : : : : : : : : : : : : : : : : : : : : : : :
QY 335 MSNNVSENNMCAGLIGRQDACEGDSGPVVASFGTWTIVGLVSGEGGLAHNYGYTT 394
||| : : : : : : : : : : : : : : : : : : : : : : : : : :
DB 386 TKTITNNMFCAGHGEGRDSCGDSGPHYTEVGSITLGIISWEGCMMGKGIT 445
||| : : : : : : : : : : : : : : : : : : : : : : : : : :
QY 395 KVSRYLDWI 403
DB 446 KVSRYVNM 454
```

RESULT 66
US-08-742-877-2
; Sequence 2, Application US/08742877
; Patent No. 6046380
; GENERAL INFORMATION:
; APPLICANT: CLARK, Anthony J.
; TITLE OF INVENTION: DNA SEQUENCES
; NUMBER OF SEQUENCES: 14
; CORRESPONDENCE ADDRESS:
; ADDRESSER: STERN, KESSLER, GOLDSTEIN & FOX, P.L.L.C.
; STREET: 1100 NEW YORK AVENUE, NW, SUITE 600
; CITY: WASHINGTON
; STATE: DC
; COUNTRY: USA

```

; ZIP: 20005-3934
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; OPERATING SYSTEM: IBM PC compatible
; SOFTWARE: Patentin Release #1.0, Version #1.30
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/742,877
; FILING DATE: 01-NOV-1996
; CLASSIFICATION: 435
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: GB 9408717.8
; FILING DATE: 03-MAY-1994
; ATTORNEY/AGENT INFORMATION:
; NAME: FLESHNER, PAZ E.
; REGISTRATION NUMBER: 34,331
; REFERENCE/DOCKET NUMBER: 0623.0470001/REF
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: (202) 371-2600
; TELEFAX: (202) 371-2540
; INFORMATION FOR SEQ ID NO: 2:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 461 amino acids
; TYPE: amino acid
; TOPOLOGY: linear
; MOLECULE TYPE: protein
US-08-742-877-2

```

```

Query Match      31.7%; Score 736; DB 3; Length 461;
Best Local Similarity 35.4%; Pred. No. 6,2e-55;
Matches 150; Conservative 72; Mismatches 156; Indels 46; Gaps 10;

```

```

QY 5 LEEHRSLSERCTEIEICDEFEAKETFCQVNDTLAFMSKRVDDQCLVPLEHRCASLCC 64
   |||:||||:||||:||||:||||:||||:||||:||||:||||:||||:||||:
DB 52 LEEFVQNLREKCEKSCFEARVFEVNTERTTEFMKQYVDDQCESNP-----CL 103
   |||:||||:||||:||||:||||:||||:||||:||||:||||:||||:
QY 65 GHGTCIDIGISFSCSGSGWGRFCQREVSFLNGLNGCTHYCLEBYWR-RCSGAPG 123
   |||:||||:||||:||||:||||:||||:||||:||||:||||:||||:
DB 104 NGSGCKDINSYECPCPGFEGKNCCLDVT---CNKNGRCEQFCNSADNKVVCSTEG 160
   |||:||||:||||:||||:||||:||||:||||:||||:||||:||||:
QY 124 YKLGDILLQHPAVYFPCGRFWKMEKRSHLKR-----DTEQDQDQV----- 167
   |||:||||:||||:||||:||||:||||:||||:||||:||||:||||:
DB 161 YRLAENKSCFPAVFPFCGRVSVSQTSLKRLRAVFPDVVNSTAEFTIDNTTOSTOS 220
   |||:||||:||||:||||:||||:||||:||||:||||:||||:||||:
QY 168 ----PRLIDGKTRBGDSFMCQVVLDSKKKLACGAVLIHPSWLTAAHOMDESCKLVLRL 223
   |||:||||:||||:||||:||||:||||:||||:||||:||||:||||:
DB 221 FNDTRVSGEDAKRGQFPWCYV-LNGKVDAPCGSIVNEKMLVTAHCVEGVKLTIVA 279
   |||:||||:||||:||||:||||:||||:||||:||||:||||:||||:
QY 224 GEYDIRRWEKWEILDIDKEVFPHPNYSKST--DNDAIALHLAQAPTSQTIVPICLPDS 281
   |||:||||:||||:||||:||||:||||:||||:||||:||||:||||:
DB 280 GEHNIETETETGKENVIRIIPHNHYNAAMINKYNDIALLELDEPLVINSVTPICIAK 339
   |||:||||:||||:||||:||||:||||:||||:||||:||||:||||:
QY 282 GLARELNQAGEETLYTGMG--YHSSREKAKARNTPVNFIKIPVPRNECEWMSNMV 339
   |||:||||:||||:||||:||||:||||:||||:||||:||||:||||:
DB 340 EYTNIFLKFG--SGYVSGMGRVPHKGS-----ALVQLYLRVPLVDATCTLSRTFTI 390
   |||:||||:||||:||||:||||:||||:||||:||||:||||:||||:
QY 340 SENNLCAGIIIGDRODAGDSGGMVVASPHGTWPLVGLVSGCGELINYGVTYKTSRY 399
   |||:||||:||||:||||:||||:||||:||||:||||:||||:||||:
DB 391 YNNFCAGFHEGRDSCGDSGGPHVTEVGTSPILGLIISGECAMKKGKIGITKTSRY 450
   |||:||||:||||:||||:||||:||||:||||:||||:||||:||||:
QY 400 LDWI 403
   |||:||||:||||:||||:||||:||||:||||:||||:||||:||||:
DB 451 VNMV 454

```

```

RESULT 67
US-09-053-871A-21
; Sequence 21, Application US/09053871A
; Patent No. 6315995
; GENERAL INFORMATION:
; APPLICANT: Pinsky, David J.
; APPLICANT: Stern, David
; APPLICANT: Rose, Eric

```

```

; APPLICANT: Solomon, Robert A.
; APPLICANT: Schmidt, Ann Marie
; TITLE OF INVENTION: METHODS FOR TREATING AN ISCHEMIC DISORDER AND IMPROVING
; TITLE OF INVENTION: STROKE OUTCOME
; FILE REFERENCE: 51917-B
; CURRENT APPLICATION NUMBER: US/09/053,871A
; CURRENT FILING DATE: 1998-04-01
; NUMBER OF SEQ ID NOS: 22
; SOFTWARE: Patentin Ver. 2.1
; SEQ ID NO 21
; LENGTH: 461
; TYPE: PRT
; ORGANISM: Homo Sapien
US-09-053-871A-21

```

```

Query Match      31.7%; Score 736; DB 4; Length 461;
Best Local Similarity 35.4%; Pred. No. 6,2e-55;
Matches 150; Conservative 72; Mismatches 156; Indels 46; Gaps 10;

```

```

QY 5 LEEHRSLSERCTEIEICDEFEAKETFCQVNDTLAFMSKRVDDQCLVPLEHRCASLCC 64
   |||:||||:||||:||||:||||:||||:||||:||||:||||:||||:
DB 52 LEEFVQNLREKCEKSCFEARVFEVNTERTTEFMKQYVDDQCESNP-----CL 103
   |||:||||:||||:||||:||||:||||:||||:||||:||||:||||:
QY 65 GHGTCIDIGISFSCSGSGWGRFCQREVSFLNGLNGCTHYCLEBYWR-RCSGAPG 123
   |||:||||:||||:||||:||||:||||:||||:||||:||||:||||:
DB 104 NGSGCKDINSYECPCPGFEGKNCCLDVT---CNKNGRCEQFCNSADNKVVCSTEG 160
   |||:||||:||||:||||:||||:||||:||||:||||:||||:||||:
QY 124 YKLGDILLQHPAVYFPCGRFWKMEKRSHLKR-----DTEQDQDQV----- 167
   |||:||||:||||:||||:||||:||||:||||:||||:||||:||||:
DB 161 YRLAENKSCFPAVFPFCGRVSVSQTSLKRLRAVFPDVVNSTAEFTIDNTTOSTOS 220
   |||:||||:||||:||||:||||:||||:||||:||||:||||:||||:
QY 168 ----PRLIDGKTRBGDSFMCQVVLDSKKKLACGAVLIHPSWLTAAHOMDESCKLVLRL 223
   |||:||||:||||:||||:||||:||||:||||:||||:||||:||||:
DB 221 FNDTRVSGEDAKRGQFPWCYV-LNGKVDAPCGSIVNEKMLVTAHCVEGVKLTIVA 279
   |||:||||:||||:||||:||||:||||:||||:||||:||||:||||:
QY 224 GEYDIRRWEKWEILDIDKEVFPHPNYSKST--DNDAIALHLAQAPTSQTIVPICLPDS 281
   |||:||||:||||:||||:||||:||||:||||:||||:||||:||||:
DB 280 GEHNIETETETGKENVIRIIPHNHYNAAMINKYNDIALLELDEPLVINSVTPICIAK 339
   |||:||||:||||:||||:||||:||||:||||:||||:||||:||||:
QY 282 GLARELNQAGEETLYTGMG--YHSSREKAKARNTPVNFIKIPVPRNECEWMSNMV 339
   |||:||||:||||:||||:||||:||||:||||:||||:||||:||||:
DB 340 EYTNIFLKFG--SGYVSGMGRVPHKGS-----ALVQLYLRVPLVDATCTLSRTFTI 390
   |||:||||:||||:||||:||||:||||:||||:||||:||||:||||:
QY 340 SENNLCAGIIIGDRODAGDSGGMVVASPHGTWPLVGLVSGCGELINYGVTYKTSRY 399
   |||:||||:||||:||||:||||:||||:||||:||||:||||:||||:
DB 391 YNNFCAGFHEGRDSCGDSGGPHVTEVGTSPILGLIISGECAMKKGKIGITKTSRY 450
   |||:||||:||||:||||:||||:||||:||||:||||:||||:||||:
QY 400 LDWI 403
   |||:||||:||||:||||:||||:||||:||||:||||:||||:||||:
DB 451 VNMV 454

```

```

RESULT 68
US-10-133-907-5
; Sequence 5, Application US/10133907
; Patent No. 6677369
; GENERAL INFORMATION:
; APPLICANT: Chien, Kenneth R
; APPLICANT: Hoshijima, Masahiko
; TITLE OF INVENTION: Method to treat hemophilia by hepatic gene transfer of Factor V.
; TITLE OF INVENTION: with vesicle vector
; FILE REFERENCE: 6627-PAL170
; CURRENT APPLICATION NUMBER: US/10/133,907
; CURRENT FILING DATE: 2002-04-25
; PRIOR APPLICATION NUMBER: 60/286,314
; PRIOR FILING DATE: 2001-04-25
; NUMBER OF SEQ ID NOS: 5
; SOFTWARE: Patentin version 3.1
; SEQ ID NO 5
; LENGTH: 461
; TYPE: PRT
; ORGANISM: Homo sapiens
US-10-133-907-5

```

Query Match 31.7%; Score 736; DB 4; Length 461;
Best Local Similarity 35.4%; Pred. No. 6 2e-55;
Matches 150; Conservative 72; Mismatches 156; Indels 46; Gaps 10;

```
QY 5 LEEIHHSSLERECEIEICDFEAKKIFQNVDDTLAFWSKAVDQDCLVPLEHPCASLCC 64
DB 52 LEEFVQNLRECECKECSFEAREVEFENTERFTTEFWKQYVDGQCSNP-----CL 103
QY 65 GNGTCLDIGISFSCDGRSGMEGRPCQREVSFLNCSLDNGGCTHCLBEVGR-RSCAPG 123
DB 104 NGSSCKDDINSYECWCPFGFEKGCNCLDVT--CNKNGRCQPCXNSADNVCVCSCTEG 160
QY 124 YKLGDDILQCHPAVPCGPRPWKEKRSKSHLR-----DTEDEQDQV----- 167
DB 161 YKLANQSCCEPAVPCGPRVSVQTSKLTBAETVPDYVNSTEFTILDNITQSTQS 220
QY 168 ----PRLIDGKMTRRGDSFMQVYLLDSKKKLACGAVLHPSMVLTAACHDESKLLVRL 223
DB 221 FNDFTRVVGGEDAKPGQFPMQVY-LNGKVDAFCGSSIVNEKMTVAACHCVETGKLTVA 279
QY 224 GEYDLRRKEMKELDLDIKVFNHNYKSTT--DNDIALHLAOPATISQITVPICLPDS 281
DB 230 GHNIEETETEQKRVYIRLIPHNNYNAALNKXNHDIALLELDPLVINSYVTPICLADK 339
QY 282 GLAERLNAQGEETLVYWG--YHSSREKAKNRFTVNLPIKIPVYPHNECEVMSNV 339
DB 340 EYTNITLKEG--SGYVSGMGVFNHGRS-----ALVLYLRPLVDRAICLSTKFTI 390
QY 340 SENMLCAGILDRQDACEGDSGGEPMVASFHGTWFLVGVSWEGCGLLHNYGYTVKSRX 399
DB 391 YNNMFCAGFHGGRDSCQGDSCGPHVTEVEGTSFLTGIIISWEGCANKKGYGYTVKSRX 450
QY 400 LDMI 403
DB 451 VNMV 454
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RESULT 69
US-09-118-748-2

```
/ Sequence 2, Application US/09118748A
/ Patent No. 6531298
/ GENERAL INFORMATION:
/ APPLICANT: Stafford, Darrel W.
/ TITLE OF INVENTION: Factor IX Antihemophilic Factor with Increased Clotting
/ TITLE OF INVENTION: Activity
/ FILE REFERENCE: 5470-183
/ CURRENT APPLICATION NUMBER: US/09/118,748A
/ CURRENT FILING DATE: 1998-07-17
/ EARLIER APPLICATION NUMBER: 60/053,571
/ EARLIER FILING DATE: 1997-07-21
/ NUMBER OF SEQ ID NOS: 2
/ SOFTWARE: Patentln Ver. 2.0
/ SEQ ID NO 2
/ LENGTH: 415
/ TYPE: PRT
/ ORGANISM: Homo sapiens
US-09-118-748-2
```

Query Match 31.6%; Score 735; DB 4; Length 415;
Best Local Similarity 35.4%; Pred. No. 6 6e-55;
Matches 150; Conservative 72; Mismatches 156; Indels 46; Gaps 10;

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QY 5 LEEIHHSSLERECEIEICDFEAKKIFQNVDDTLAFWSKAVDQDCLVPLEHPCASLCC 64
DB 6 LEEFVQNLRECECKECSFEAREVEFENTERFTTEFWKQYVDGQCSNP-----CL 57
QY 65 GNGTCLDIGISFSCDGRSGMEGRPCQREVSFLNCSLDNGGCTHCLBEVGR-RSCAPG 123
DB 58 NGSSCKDDINSYECWCPFGFEKGCNCLDVT--CNKNGRCQPCXNSADNVCVCSCTEG 114
QY 124 YKLGDDILQCHPAVPCGPRPWKEKRSKSHLR-----DTEDEQDQV----- 167
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DB 115 YKLANQSCCEPAVPCGPRVSVQTSKLTBAETVPDYVNSTEFTILDNITQSTQS 174
QY 168 ----PRLIDGKMTRRGDSFMQVYLLDSKKKLACGAVLHPSMVLTAACHDESKLLVRL 223
DB 175 FNDFTRVVGGEDAKPGQFPMQVY-LNGKVDAFCGSSIVNEKMTVAACHCVETGKLTVA 233
QY 224 GEYDLRRKEMKELDLDIKVFNHNYKSTT--DNDIALHLAOPATISQITVPICLPDS 281
DB 234 GHNIEETETEQKRVYIRLIPHNNYNAALNKXNHDIALLELDPLVINSYVTPICLADK 293
QY 282 GLAERLNAQGEETLVYWG--YHSSREKAKNRFTVNLPIKIPVYPHNECEVMSNV 339
DB 294 EYTNITLKEG--SGYVSGMGVFNHGRS-----ALVLYLRPLVDRAICLSTKFTI 344
QY 340 SENMLCAGILDRQDACEGDSGGEPMVASFHGTWFLVGVSWEGCGLLHNYGYTVKSRX 399
DB 345 YNNMFCAGFHGGRDSCQGDSCGPHVTEVEGTSFLTGIIISWEGCANKKGYGYTVKSRX 404
QY 400 LDMI 403
DB 405 VNMV 408
```

RESULT 70
US-08-295-411-2

```
/ Sequence 2, Application US/08295411
/ Patent No. 5679639
/ GENERAL INFORMATION:
/ APPLICANT: Griffin, John H.
/ APPLICANT: Masters, Rolf M.
/ TITLE OF INVENTION: Serine Protease-Derived Polypeptides and
/ TITLE OF INVENTION: Anti-Peptide Antibodies, Systems and Therapeutic Methods
/ TITLE OF INVENTION: for Inhibiting Coagulation
/ NUMBER OF SEQUENCES: 10
/ CORRESPONDENCE ADDRESS:
/ ADDRESS: Office of Patent Counsel, The Scripps
/ STREET: 10666 No. 5679639th Torrey Pines Road, TPC 8
/ CITY: La Jolla
/ STATE: CA
/ COUNTRY: USA
/ ZIP: 92037
/ COMPUTER READABLE FORM:
/ MEDIUM TYPE: Floppy disk
/ OPERATING SYSTEM: IBM PC compatible
/ SOFTWARE: Patentln Release #1.0, Version #1.25
/ CURRENT APPLICATION DATA:
/ APPLICATION NUMBER: US/08/295,411
/ FILING DATE: 22-AUG-1994
/ CLASSIFICATION: 530
/ PRIOR APPLICATION DATA:
/ APPLICATION NUMBER: US 07/793,989
/ FILING DATE: 18-NOV-1991
/ CLASSIFICATION: 530
/ ATTORNEY/AGENT INFORMATION:
/ NAME: Fitting, Thomas
/ REGISTRATION NUMBER: 34,163
/ REFERENCE/DOCKET NUMBER: TSRI263.0C1
/ TELECOMMUNICATION INFORMATION:
/ TELEPHONE: 619-554-2937
/ TELEFAX: 619-554-6312
/ INFORMATION FOR SEQ ID NO: 2:
/ SEQUENCE CHARACTERISTICS:
/ LENGTH: 415 amino acids
/ TYPE: amino acid
/ TOPOLOGY: linear
/ MOLECULE TYPE: protein
/ HYPOTHEICAL: NO
/ ANTI-SENSE: NO
/ FEATURE:
/ NAME/KEY: Region
```


Db 404 YNMW 408

RESULT 72

PCT-US92-10242-2

Sequence 2, Application PC/TUS9210242

GENERAL INFORMATION:

APPLICANT: Grifflin, John H.

APPLICANT: Meeters, Rolf

TITLE OF INVENTION: Serine Protease-Derived Polypeptides and

TITLE OF INVENTION: Anti-Peptide Antibodies, Systems and Therapeutic Methods

TITLE OF INVENTION: for Inhibiting Coagulation

NUMBER OF SEQUENCES: 10

CORRESPONDENCE ADDRESSES:

ADDRESSEE: Office of Patent Counsel, The Scripps

ADDRESSEE: Research Institute

STREET: 10666 North Torrey Pines Road, TPC 8

CITY: La Jolla

STATE: CA

COUNTRY: USA

ZIP: 92037

COMPUTER READABLE FORM:

MEDIUM TYPE: Floppy disk

COMPUTER: IBM PC compatible

OPERATING SYSTEM: PC-DOS/MS-DOS

SOFTWARE: Patent Release #1.0, Version #1.25

CURRENT APPLICATION DATA:

APPLICATION NUMBER: PCT/US92/10242

FILING DATE: 19921118

CLASSIFICATION:

PRIOR APPLICATION DATA:

APPLICATION NUMBER: US 07/793,989

FILING DATE: 18-NOV-1991

ATTORNEY/AGENT INFORMATION:

NAME: Fitting, Thomas

REGISTRATION NUMBER: 34,163

REFERENCE/DOCKET NUMBER: SCRO472P

TELEPHONE: 619-554-2937

TELEFAX: 619-554-6312

INFORMATION FOR SEQ ID NO: 2:

SEQUENCE CHARACTERISTICS:

LENGTH: 415 amino acids

TYPE: AMINO ACID

TOPOLOGY: linear

MOLECULE TYPE: protein

HYPOTHETICAL: NO

FEATURE:

NAME/KEY: Region

LOCATION: 1..145

OTHER INFORMATION: /note= "Factor IX Light Chain"

FEATURE:

NAME/KEY: Region

LOCATION: 181..415

OTHER INFORMATION: /note= "Factor IX Heavy Chain"

PCT-US92-10242-2

Query Match

Best Local Similarity 35.3%, Score 731, DB 5, Length 415;

Matches 150, Conservative 69, Mismatches 158, Indels 48, Gaps 10;

QY 5 LEEIRSSLEBCEIEICDEBEAKIFQVNDTLAFWSKHVGDQCLVPLEHPCASLCC 64

DB 6 LEEVVGALERCKEKSFEPRVFEVTEKTEFKQYVDDQCESNP-----CL 57

QY 65 GHGTCIDGIGSFDCRSGWGRFCQREVSFLNGSLNGGCHYCLEHVGMR-RGSCAG 123

Db 58 NGSGCKDINSYECMPGFGKNCELDVT---CNIKNRCEQFCNKSADNKVYCSCTEG 114

QY 124 YKGDLDLQCHPAVYFECGRPMKMEKASHUKRTEDQEDQVP----- 168

Db 115 YRLAENKSCBPAVFPFCGRVSVQTSKTRAAVAFDP-VDYVNPTEARITLIDNITGQT 173

QY 169 -----RLDGKWTGRGSPWQVVLDSKKLACGAVIHPISVTLAAACMDSEKILVR 222

Db 174 SPNPFTRVVGEDAPGQFPQVY-LNGKVDAPCGGSIWEEKIVTAACVETGKIVV 232

QY 223 LGEYDLRWMEKELDLDIKEVFPVNPYSKSTT--DNIDIALHACPAATLSQTIYICLPD 280

Db 223 AGEHNIETETHEQKRVYIRIIPHHVYNAIKYVHDIALLEDEPLVANSYVPEICAD 292

QY 281 SGAEFLINGACQETLVYWG--YHSREKAKRKTIVNFIKIIVYHNECSWNSM 338

Db 293 KEYNIFLKFQ--SGYVGMARVHHGRS-----ALVLYQVRLVDRATCLRSTFT 343

QY 339 VSENNLCAGILGDRODACEGSGGPMVASFHGTWFLVGLVSMGCGGLLHNGVYTKVR 398

Db 344 IYNNMPCAGHREGGDSQCGSGGPHVTEBGTSTLGIISWGBEAMGKGTGYTKYR 403

QY 399 YLDWI 403

Db 404 YNMW 408

RESULT 73

US-08-293-778-24

Sequence 24, Application US/08293778

Patent No. 5580560

GENERAL INFORMATION:

APPLICANT: Nicolaisen, Else M.

APPLICANT: Bjorn, Soren E.

APPLICANT: Wiberger, Finn C.

APPLICANT: Woodbury, Richard

TITLE OF INVENTION: MODIFIED FACTOR VII/VIIa

NUMBER OF SEQUENCES: 26

CORRESPONDENCE ADDRESSES:

ADDRESSEE: No. 5580560 No. 5580560disk of No. 5580560th America, Inc.

STREET: 405 Lexington Avenue, 62nd Floor

CITY: New York

STATE: New York

COUNTRY: United States of America

ZIP: 10174-6201

COMPUTER READABLE FORM:

MEDIUM TYPE: Floppy disk

COMPUTER: IBM PC compatible

OPERATING SYSTEM: PC-DOS/MS-DOS

SOFTWARE: Patent Release #1.0, Version #1.25

CURRENT APPLICATION DATA:

APPLICATION NUMBER: US/08/293,778

FILING DATE:

CLASSIFICATION: 435

PRIOR APPLICATION DATA:

APPLICATION NUMBER: US/08/104,509

FILING DATE:

APPLICATION NUMBER: DK 3235/87

FILING DATE: 25-JUN-1987

PRIOR APPLICATION DATA:

APPLICATION NUMBER: US 07/434,149

FILING DATE: 13-NOV-1989

PRIOR APPLICATION DATA:

APPLICATION NUMBER: PCT/DK88/00103

FILING DATE: 24-JUN-1988

PRIOR APPLICATION DATA:

APPLICATION NUMBER: US 07/898,248

FILING DATE: 12-JUN-1992

ATTORNEY/AGENT INFORMATION:

NAME: Agis, Cheryl H.

REGISTRATION NUMBER: 34,086

REFERENCE/DOCKET NUMBER: 3129,224-US

TELECOMMUNICATION INFORMATION:

TELEPHONE: 212-867-0123
 TELEFAX: 212-857-0298
 INFORMATION FOR SEQ ID NO: 24:
 SEQUENCE CHARACTERISTICS:
 LENGTH: 406 amino acids
 TYPE: amino acid
 STRANDEDNESS: single
 TOPOLOGY: linear
 MOLECULE TYPE: protein
 US-09-293-778-24

Query Match 30.5%; Score 708; DB 1; Length 406;
 Best Local Similarity 36.4%; Pred. No. 1,3e-52;
 Matches 154; Conservative 75; Mismatches 158; Indels 36; Gaps 10;

QY 1 ANSFLIEIRHSSLERECEIETDEFEAKETIQVNDPTLAFWSKAYDQCLVPLEHPCA 60
 DB 1 ANAFIYLRPSGLIYRYCKYQCSFYARYIFKNAVYTKLFWISYDQDQ-----AS 52
 QY 61 SICGHTGTCIDIGSGSCDCRSQWEGRCQ-REVSFLNCSLNDGSCYTHLEGVWR-C 118
 DB 53 SPQWSSCKFQLQSTICFLPAEGRNCEITHDQDLIENENGSCYQCSHTGTKASC 112
 QY 119 SCAPYKLGDDLLQCHPAVPCGRPWKREKRSKSLKDTDEQDQVDPRLIDKATRR 178
 DB 113 RCHEGYSLADGVSCPTVEYPCGK-IPILEKNA-----SKQGRIVGKVCCK 161
 QY 179 GSPNQVYLLDSKKKACGNAVLIHESWYLRNACQMESEK---KILVRLGYDLRMEKNE 235
 DB 162 GECFQVYLLVNGAQL-CGSLTILNTIYVSNACCFDKIKNMRNLIAYLGHDSHDE 220
 QY 236 LDLDKEVYFVPMWSKSTTDNDIALHIAOPATISQTIYVLCIDPSGLARELNOAGQET 295
 DB 221 QSRRYAQVITITSTYVETINHDIALRIHQPVYLDHVPYLCHEPERSKTLAVY-RFS 279
 QY 296 LVTGWYSSSEKAKKNTFVNLFIKLPVFNHCEVW-----SNMVSNNLCAGLIG 350
 DB 280 LVSGWQLLDREGATA-----LELAVLANVPLMTQDCLQSRKVGSPNITEYVFCAGYSD 334
 QY 351 DQDQACEDSGGPMWASFHGTWFLVGLMSNGEGGLNHYGYTKVSRVYDHHIHDK 410
 DB 335 GSKDCKSDSGSPHATHTGWTYLVGLVSWGCGATVGHGVYTRQVYLEMLKMSB 394
 QY 411 EAP 413
 DB 395 PRP 397

RESULT 74

US-08-952-967-8
 Sequence 8, Application US/08952967
 Patent No. 6086871

GENERAL INFORMATION:
 APPLICANT: Fischer, Bernhard
 APPLICANT: Schlokat, Uwe
 APPLICANT: Miltner, Artur
 APPLICANT: Falkner, Falko-Guenther
 APPLICANT: Eibl, Johann
 TITLE OF INVENTION: PROTHROMBIN DERIVATIVES
 NUMBER OF SEQUENCES: 22

CORRESPONDENCE ADDRESS:
 ADDRESSEE: Foley & Lardner
 STREET: 3000 K Street, N.W., Suite 500
 CITY: Washington
 STATE: D.C.
 COUNTRY: USA

ZIP: 20007-5109
 COMPUTER READABLE FORM:
 MEDIUM TYPE: Floppy disk
 COMPUTER: IBM PC compatible
 OPERATING SYSTEM: PC-DOS/MS-DOS
 SOFTWARE: PatentIn Release #1.0, Version #1.30
 CURRENT APPLICATION DATA:

APPLICATION NUMBER: US/08/952,967
 FILING DATE: 26-JAN-1998
 CLASSIFICATION: 514
 PRIOR APPLICATION DATA:
 APPLICATION NUMBER: PCT/AT96/00105
 FILING DATE: 12-JUN-1996
 PRIOR APPLICATION DATA:
 APPLICATION NUMBER: AT A 1006/95
 FILING DATE: 13-JUN-1995
 ATTORNEY/AGENT INFORMATION:
 NAME: Isaacson, John P.
 REGISTRATION NUMBER: 33,715
 REFERENCE/DOCKET NUMBER: 065691/0127
 TELECOMMUNICATION INFORMATION:
 TELEPHONE: (202)672-5300
 TELEFAX: (202)672-5359
 TELER: 904136
 INFORMATION FOR SEQ ID NO: 8:
 SEQUENCE CHARACTERISTICS:
 LENGTH: 622 amino acids
 TYPE: amino acid
 TOPOLOGY: linear
 MOLECULE TYPE: protein
 US-08-952-967-8

Query Match 24.2%; Score 563.5; DB 3; Length 622;
 Best Local Similarity 28.9%; Pred. No. 5e-40;
 Matches 166; Conservative 63; Mismatches 160; Indels 191; Gaps 24;

QY 1 ANSFLIEIRHSSLERECEIETDEFEAKETIQVNDPTLAFWSKAYDQCLVPLEHPCA 60
 DB 44 ANTFLEEVKKNLRECEVEETCSYEBAFEALSSSTATDYFMAYKACTART-PRDKLAA 102
 QY 61 SLCGHTGTCIDIGS-----FSCDCRSQWEGR-----FCQ 90
 DB 103 ---CLGNCABSLGNYRGNHTNSGLECP-WRSKYPKRPINSTHSGADLQENPCR 158
 QY 91 R-----EVSFLN-----CSLNDG 103
 DB 159 NPDSTMGWCTYTDPTVRQECSTPVCQDQVTVAMTPRSBSVNLSPLEQCVPDG 218
 QY 104 G-----CTH-----YCL-----EYVGMRCGC 120
 DB 219 QYQGRILAVTHGLPCILAMASQAALSKHODFNSAVQLVFNCPNPDGDEGYW---C 274
 QY 121 APGYKGD---DLQCHPAV-----KF 139
 DB 275 YVAGKPEDRGYCDLANYCEBAVERETGDLDEDSRALBGRATASRYQTFNPRTPSGGA 334
 QY 140 PCG-RPWKMERKRSKSLKDTDEQDQVDPRLIDKATRRGDSPMQVYLL-DSKKIACG 197
 DB 335 DCGLRP--LFEKKSLEDKTERELLESYIDGRIVRGSDAEIGMSPMQVYLLFRKSPQILLG 392
 QY 198 AVLHESWYLTAAHOM-----DES---KILVRLGEVDLARMEK-WELDLDIKFVFN 248
 DB 393 ASLISDRWYLTAAHCLVPPMDKNFTENDLVRIGKSRIRKRIETKISMLEKITYIHRP 452
 QY 249 YS-KSTTDNDIALHIAQPATLSQTIYVLCIDPSGLARELNOAGETLVYWG-YSHSR 306
 DB 453 YNRENDLDDIALMLKPKPAVAFSDYIHPCAPDETA-ASLDAQYKRYTGMGNLKEITW 511
 QY 307 EKEAKRRTFTVNFIXIIVVPHNEGCEVMSNVSNNLCAGLI---GROACGSDGCG 363
 DB 512 TANVGKQSPSYQVAVNPVIVRPPVCDSTRIIDNNFCAGYRPDGRKGDACGSDG 571
 QY 364 WY--ASPHGTWFLVGLVSWEGGGLLHNYGVYTKVSRVLDWI 403
 DB 572 FVMSPPNRRYQMGIVSWGSCDRQKKGFTTHFRLKMI 613

RESULT 75
 US-08-295-411-4
 Sequence 4, Application US/08295411

Patent No. 5679639
GENERAL INFORMATION:
APPLICANT: Griffith, John H.
APPLICANT: Meesters, Rolf M.
TITLE OF INVENTION: Serine Protease-Derived Polypeptides and
TITLE OF INVENTION: Anti-Peptide Antibodies, Systems and Therapeutic Methods
TITLE OF INVENTION: for Inhibiting Coagulation
NUMBER OF SEQUENCES: 10
CORRESPONDENCE ADDRESS:
ADDRESSEE: Office of Patent Counsel, The Scripps
ADDRESSEE: Research Institute
STREET: 10666 No. 5679639th Torrey Pines Road, TPC 8
CITY: La Jolla
STATE: CA
COUNTRY: USA
ZIP: 92037
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
OPERATING SYSTEM: IBM PC compatible
SOFTWARE: Patent Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/295,411
FILING DATE: 22-AUG-1994
CLASSIFICATION: 530
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 07/793,989
FILING DATE: 18-NOV-1991
CLASSIFICATION: 530
ATTORNEY/AGENT INFORMATION:
NAME: Fitting, Thomas
REGISTRATION NUMBER: 34,163
REFERENCE/DOCKET NUMBER: TSRI263.001
TELECOMMUNICATION INFORMATION:
TELEPHONE: 619-554-2937
TELEFAX: 619-554-6312
INFORMATION FOR SEQ ID NO: 4:
SEQUENCE CHARACTERISTICS:
LENGTH: 579 amino acids
TYPE: amino acid
TOPOLOGY: linear
MOLECULE TYPE: protein
HYPOTHETICAL: NO
FEATURE:
NAME/KEY: Region
LOCATION: 1-320
OTHER INFORMATION: /note= "Prothrombin light Chain"
NAME/KEY: Region
LOCATION: 321..579
OTHER INFORMATION: /note= "Prothrombin Heavy Chain"
US-08-295-411-4
Query Match 24.2%, Score 562.5, DB 1, Length 579;
Best Local Similarity 28.9%, Pred. No. 5,6e-40;
Matches 168; Conservative 63; Mismatches 160; Indels 191; Gaps 24;
QY 1 ANSHLELRHSLSECEIEELCDPEAKETIRNDITLAFMSHNDGQCIVLPLEHPCA 60
DB 1 ANPFLERKGNLEHECEVETCSYERFALESSTATDVWAKYACTAET-PRKLLA 59
QY 61 SLCCGHTCIDIGS-----PSCDSGWEGR-----FCQ 90
DB 60 ---CLSGNCAEGLGNRYGHVNTTRSGIECCQ-WSRYPKRPHNSTTHPGADQENFGA 115
QY 91 R-----EVSPLN-----CSLDNG 103
DB 116 NPDSNVTGWCYTTDPTRRQECSLPVCQDQVTVMTPRSESSVNLSPLEQCVBDRG 175
QY 104 G-----CTH-----YCL-----EYGVTRCSC 120
DB 176 QQVGRGLAVTTHGLPCLAMASQAQKALSKGQDFNSAVQVLENFCRNPDSDEGVW---C 231

QY 121 ARGYKGD-----DLQCHPAV-----KF 139
DB 232 YVAKPQDFQYDLYNCEAVEEETDDEDSDBALGRTATSEYQTFPNERFGSGA 291
QY 140 PCG-RPKRREKKRSHLRDTEDEQDVPRLIDGKTRRGSPPQVWL-DGKKKLACG 197
DB 292 DQGRP--LFEKSLDETEBLLSESTYIGRIVESDAETGMSPPQVWLPFRSPQELLCG 349
QY 199 AVLIHPSWVLTAAACM-----DES---KLLVRLGEYDLRRWK-WELDLIKEYEVAHN 248
DB 350 ASLISDRWVLTAAHCLLPYMDKNFTENDLVRLTQKHSRTYERNI EKLSMEKIYHPR 409
QY 249 VS-KSTDDNIALHQAATLSQTYPCDPSGLARELNQAQETLYTCWG-YHSSR 306
DB 410 YNMBENLDRIALMKLKEVAFSDYIHPVCLPDBETA-ASLLQAGKGVGTGMLKETW 468
QY 307 EKEAKRRTVLNFIKIPVPHNECSFVSNMYSNMLCAGIL---GDRQDACEGSGP 363
DB 469 TANYGKQPSVQYVNLPIVERPVCNSTRIRITDMMCAQYKDEGKGDACEGDSGSP 528
QY 364 WV--ASTFHGTFLVGLVSGGCGLLHNTGYTYKRYLDWI 403
DB 529 FVMSPPNNRWQMGIVSGGCDRDKYGFYTHVFLKMWI 570
RESULT 76
US-08-955-471-4
Sequence 4, Application US/08955471
Patent No. 5968751
GENERAL INFORMATION:
APPLICANT: Griffith, John H.
APPLICANT: Meesters, Rolf M.
TITLE OF INVENTION: Serine Protease-Derived Polypeptides and
TITLE OF INVENTION: Anti-Peptide Antibodies, Systems and Therapeutic Methods
NUMBER OF SEQUENCES: 10
CORRESPONDENCE ADDRESS:
ADDRESSEE: Office of Patent Counsel, The Scripps
ADDRESSEE: Research Institute
STREET: 10666 No. 5968751th Torrey Pines Road, TPC 8
CITY: La Jolla
STATE: CA
COUNTRY: USA
ZIP: 92037
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
OPERATING SYSTEM: IBM PC compatible
SOFTWARE: Patent Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/955,471
FILING DATE:
CLASSIFICATION:
PRIOR APPLICATION DATA:
APPLICATION NUMBER: 08/295,411
FILING DATE:
CLASSIFICATION:
ATTORNEY/AGENT INFORMATION:
NAME: Fitting, Thomas
REGISTRATION NUMBER: 34,163
REFERENCE/DOCKET NUMBER: TSRI263.001
TELECOMMUNICATION INFORMATION:
TELEPHONE: 619-554-2937
TELEFAX: 619-554-6312
INFORMATION FOR SEQ ID NO: 4:
SEQUENCE CHARACTERISTICS:
LENGTH: 579 amino acids
TYPE: amino acid
TOPOLOGY: linear
MOLECULE TYPE: protein
HYPOTHETICAL: NO
ANTI-SENSE: NO

STATE: D.C.
COUNTRY: USA

TITLE OF INVENTION: Self

TITLE OF INVENTION: Anti-peptide Antibodies, Systems and Therapeutic Methods
TITLE OF INVENTION: for Inhibiting Coagulation
NUMBER OF SEQUENCES: 10
CORRESPONDENCE ADDRESS:
ADDRESSER: Office of Patent Counsel, The Scripps
ADDRESSEE: Research Institute
STREET: 10666 North Torrey Pines Road, TPC 8
CITY: La Jolla
STATE: CA
COUNTRY: USA
ZIP: 92037
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patent Release #1.0, Version #1.25
CURRENT APPLICATION NUMBER: PCT/US92/10242
APPLICATION NUMBER: PCT/US92/10242
FILING DATE: 19921118
CLASSIFICATION:
PRIORITY APPLICATION DATA:
APPLICATION NUMBER: US 07/793,989
FILING DATE: 18-NOV-1991
ATTORNEY/AGENT INFORMATION:
NAME: Filling, Thomas
REGISTRATION NUMBER: 34,163
REFERENCE/DOCKET NUMBER: SC0472P
TELECOMMUNICATION INFORMATION:
TELEPHONE: 619-554-2937
TELEFAX: 619-554-6312
INFORMATION FOR SEQ ID NO: 4:
SEQUENCE CHARACTERISTICS:
LENGTH: 579 amino acids
TYPE: AMINO ACID
TOPOLOGY: linear
MOLECULE TYPE: protein
HYPOTHETICAL: NO
ANTI-SENSE: NO
FEATURE:
NAME/KEY: Region
LOCATION: 1..320
OTHER INFORMATION: /note="Prothrombin Light Chain"
FEATURE:
NAME/KEY: Region
LOCATION: 321..579
OTHER INFORMATION: /note="Prothrombin Heavy Chain"
PCT-US92-10242-4
Query Match 24.2%; Score 562.5; DB 5; Length 579;
Best Local Similarity 28.9%; Pred. No. 5.6e-40;
Matches 168; Conservative 63; Mismatches 160; Indels 191; Gaps 24;
QY 1 ANSPLELRHSLEKCEIEICDFEAKETIFQVNDTLAFLWSKKVDQCLVPLEHPCA 60
DB 1 ANTFEEVFKNLEKRECEVEETCSYHEAFALSSSTATDVFAKTRACETART-PRDKLAA 59
QY 61 SLCCGHTCTIDIGS-----FSCDCRSQWGR-----FCQ 90
DB 60 ---CLGNCAGLGTWVRGHNVTITSGLEQL-MSGRYPKPKELNSTTHRGADLQENCR 115
QY 91 R-----EVSFLN-----CSLNG 103
DB 116 NPDSNTPWCYTTDPTVRQECSPVCGQDQYTVAMTPRSQSSVNLSPLEQCPDRG 175
QY 104 G-----CTH-----YCL-----EEGMRRCSC 120
DB 176 QQYQGRVAVTTHGIPCLAAASAQATLSKQDQNSAVQVFNFCNPDGGBEGW-----C 231
QY 121 AEGYKIGD---DLQCHPAV-----KF 139
DB 232 YVAGKPGDFGVCDLNYCEAVESEETGDLDESDRALEGRATISHTYCFNPFRTFGSGRA 291
QY 140 PG-RPMKRMKRSKSHLKDPTDQSDQYDVPRLIDGNTTRGSPQGVYLL-DSKKTLAQ 197

DB 292 DGLRPP---LEKKSLEDKTERELLESYIDRIVESGDAEISMSPQVMLFRKSPQELLCG 349
QY 198 ATLHPBWVLTAAHGM-----DES---KGLVRIEYVLPKRWK-MEILDIKEVYHPN 248
DB 350 ASLSDRNVLTAAHCLYPMDKNFTENDLVVIGHSRTRTYENIKLSMTEKTIYHPR 409
QY 249 VS-KSTTDNDIALLHAPATLSOTIVPICLPDGLARELNQAGQETITVWG-YHSSR 306
DB 410 YMRNENDRIDALMLTKRPAVSQYIHPVCLPDRETA-ASLQAGYKGRVYTGKMLKETW 468
QY 307 EKEARNEFTVNLFIKIPVPHNCESSVMSNMTSENMLCAGTL---GRODACEDSGGP 363
DB 469 TANVKGQPSYLVQVNLPIVERPVCKDSTRIRITNMPGAGYKPDGKGDACBDSGSP 528
QY 364 NV--ASHHGCTMVLGVSMGEGCLLNNGVYKYSRYLDWI 403
DB 529 FVMSPFNNRYQMGIVSWBSCDRDGKGYFTHVRLKMI 570
RESULT 79
US-07-998-972A-3
Sequence 3, Application US/07998972A
Patent No. 5476777
GENERAL INFORMATION:
APPLICANT: Holly, Richard D.
APPLICANT: Foster, Donald C.
TITLE OF INVENTION: METHODS FOR PRODUCING THROMBIN
NUMBER OF SEQUENCES: 48
CORRESPONDENCE ADDRESS:
ADDRESSER: Townsend and Townsend
STREET: One Market Plaza, Stewart Street Tower,
STREET: Twentieth Floor
CITY: San Francisco
STATE: CA
COUNTRY: USA
ZIP: 94105
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patent Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/07/998,972A
FILING DATE: 19921230
CLASSIFICATION: 435
PRIORITY APPLICATION DATA:
APPLICATION NUMBER: US 07/860,701
FILING DATE: 31-MAR-1992
PRIORITY APPLICATION DATA:
APPLICATION NUMBER: US 07/816,281
FILING DATE: 31-DEC-1991
ATTORNEY/AGENT INFORMATION:
NAME: Parmelee, Steven W.
REGISTRATION NUMBER: 31,990
REFERENCE/DOCKET NUMBER: 13952-12-2
TELECOMMUNICATION INFORMATION:
TELEPHONE: 206-467-9600
TELEFAX: 415-543-5043
INFORMATION FOR SEQ ID NO: 3:
SEQUENCE CHARACTERISTICS:
LENGTH: 615 amino acids
TYPE: amino acid
TOPOLOGY: linear
MOLECULE TYPE: protein
US-07-998-972A-3
Query Match 24.2%; Score 562.5; DB 1; Length 615;
Best Local Similarity 28.9%; Pred. No. 6e-40;
Matches 168; Conservative 63; Mismatches 160; Indels 191; Gaps 24;
QY 1 ANSPLELRHSLEKCEIEICDFEAKETIFQVNDTLAFLWSKKVDQCLVPLEHPCA 60

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Db 37 ANTFLEEVKRNLERECVETCSYEAFEALESSTATDVWAKYACTART-PRDKLAA 95
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Db 96 ---CLEGNACAGLGNRGHVNITRSGIEQL-WRSRYPHKPEINSTTHRGADLQENCR 151
QY 91 R-----EVSFLN-----CSLDNG 103
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QY 104 G-----CTH-----YCL-----EYGVNRCSG 120
Db 212 QOYGRILAVTTHGLPCLAMASAQAKLSKHODFNSAVQVLENFCRNPGBDEGVN---C 267
QY 121 APGYKLD---DLQCHPAV-----X 139
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QY 140 PCG-RPKMKMKRSHLKRDTEDQDVDPRLIDGKTRRGSFMOVYLL-DSKKKLACG 197
Db 328 DQGLRP--LFEKKSLEDKTERELLESYIDGRIVEGSDAEIGMSPMQVNLFRKSPQELLG 385
QY 198 AVLIHPSWYLLTAHQM-----DES---KLLVRLGEYDLRMRK-MEIDLIRKEVFYHPN 248
Db 386 ASLISDRWYLLTAHACLTPPMDKNFTENDLVRIHGSRTRYENIRIKISMLEKTYIHR 445
QY 249 YS-KSTTNDIALTLHAQPAITLSQITVPCIPDSGLAERLNOAQETLVYWG-VHSSR 306
Db 446 YMKREMLDRDIALMKLKKPVAFSDYIHVCLPDRBTR-ASLIDQGYKRGVYGMNLEKWTM 504
QY 307 EKEAKNRFTVYLNFIKIPVPHNECSVMSNMVSENNLCAGIL--GDRDACEGDSGAP 363
Db 505 TANVGKQPSVLYQVNNLPYVERPVCKDSTRRLITDNNFCAGYKPDGKGDACEGDSGAP 564
QY 364 MV--ASFHGTWFLVGLVSMGEGCLLHNYGYTYKYSRYLDM 403
Db 565 FVMSPPNNRWYOMGIVSMGEGCDRGKGYGTYHVFLLKKMI 606

RESULT 80
US-08-463-953-3
; Sequence 3, Application US/08463953
; Patent No. 5502034
; GENERAL INFORMATION:
; APPLICANT: Holly, Richard D.
; APPLICANT: Foster, Donald C.
; TITLE OF INVENTION: METHODS FOR PRODUCING THROMBIN
; NUMBER OF SEQUENCES: 48
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Townsend and Townsend
; STREET: One Market Plaza, Stewart Street Tower,
; STREET: Twentieth Floor
; CITY: San Francisco
; STATE: CA
; COUNTRY: USA
; ZIP: 94105
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: Patentin Release #1.0, Version #1.25
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/463,953
; FILING DATE:
; CLASSIFICATION: 5.14
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 07/860,701
; FILING DATE: 31-MAR-1992
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 07/816,281
; FILING DATE: 31-DEC-1991
; ATTORNEY/AGENT INFORMATION:
; NAME: Patmelee, Steven W

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; REGISTRATION NUMBER: 31,990
; REFERENCE/DOCKET NUMBER: 13952-12-2
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: 206-467-9600
; TELEFAX: 415-543-5043
; INFORMATION FOR SEQ ID NO: 3:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 615 amino acids
; TYPE: amino acid
; TOPOLOGY: linear
; MOLECULE TYPE: protein
; US-08-463-953-3
Query Match 24.2%; Score 562.5; DB 1; Length 615;
Best Local Similarity 28.9%; Pred. No. 66-40;
Matches 168; Conservative 63; Mismatches 160; Indels 191; Gaps 24;

QY 1 ANTFLEEVKRNLERECVETCSYEAFEALESSTATDVWAKYACTART-PRDKLAA 95
Db 37 ANTFLEEVKRNLERECVETCSYEAFEALESSTATDVWAKYACTART-PRDKLAA 95
QY 61 SLCCGHTCTDGTGS-----FSCDGRSGMER-----FCQ 90
Db 96 ---CLEGNACAGLGNRGHVNITRSGIEQL-WRSRYPHKPEINSTTHRGADLQENCR 151
QY 91 R-----EVSFLN-----CSLDNG 103
Db 152 NPDSSNTGWCYTTDPVTRQBCSLPVCGQDVYVAMTPRBSGSSVLSPLBQCVPRG 211
QY 104 G-----CTH-----YCL-----EYGVNRCSG 120
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QY 121 APGYKLD---DLQCHPAV-----X 139
Db 268 YVAKRGDGVGYCDLNTYCEBAVEETGDLDESDRAIBGRVATSEYQTFNPRPTSGSEA 327
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Db 328 DQGLRP--LFEKKSLEDKTERELLESYIDGRIVEGSDAEIGMSPMQVNLFRKSPQELLG 385
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QY 307 EKEAKNRFTVYLNFIKIPVPHNECSVMSNMVSENNLCAGIL--GDRDACEGDSGAP 363
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QY 364 MV--ASFHGTWFLVGLVSMGEGCLLHNYGYTYKYSRYLDM 403
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RESULT 81
US-08-462-261-3
; Sequence 3, Application US/08462261
; Patent No. 5527692
; GENERAL INFORMATION:
; APPLICANT: Holly, Richard D.
; APPLICANT: Foster, Donald C.
; TITLE OF INVENTION: METHODS FOR PRODUCING THROMBIN
; NUMBER OF SEQUENCES: 48
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Townsend and Townsend
; STREET: One Market Plaza, Stewart Street Tower,
; STREET: Twentieth Floor
; CITY: San Francisco
; STATE: CA

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; COUNTRY: USA
; ZIP: 94105
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: Patentin Release #1.0, Version #1.25
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/462,261
; FILING DATE: 05-JUN-1995
; CLASSIFICATION: 424
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 07/998,972
; FILING DATE: 30-DEC-1992
; APPLICATION NUMBER: US 07/860,701
; FILING DATE: 31-MAR-1992
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 07/816,281
; FILING DATE: 31-DEC-1991
; ATTORNEY/AGENT INFORMATION:
; NAME: Parmelee, Steven W
; REGISTRATION NUMBER: 31,990
; REFERENCE/DOCKET NUMBER: 13952-12-2
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: 206-467-9600
; TELEFAX: 415-543-5043
; INFORMATION FOR SEQ ID NO: 3:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 615 amino acids
; TYPE: amino acid
; TOPOLOGY: linear
; MOLECULE TYPE: protein
; US-08-462-261-3

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Query Match      24.2%; Score 562.5; DB 1; Length 615;
Best Local Similarity 28.9%; Pred. No. 66-40;
Matches 168; Conservative 63; Mismatches 160; Indels 191; Gaps 24;

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QY 1 ANSFLERHSSIERECIEICDEFEAKEIFQVNDTLAENSKVADQCVLPLEHPCA 60
DB 37 ANTFLEVRKGNIERCEVEETCSYEAFALESSTADIVWAKYTAETART-PRDCLAA 95
QY 61 SLCCGHGTCLDIDGGS-----FSCDGRSGWGR-----FCQ 90
DB 96 ---CLBGNCAEGLGTVNGHVNI TRSGIECOL-WRSRYPHKEINSTTHPGADQENFPCA 151
QY 91 R-----EVSFLN-----CSLDNG 103
DB 152 NPDSSNTGPMCTTPTVTRQECSTIPVCGQDQVTVAMTPRSBSSVNLSPLEQCVPRDG 211
QY 104 G-----CTH-----YCL-----EEVGRRCSC 120
DB 212 QOYQRLAVTTTHGLPCLAMASQA KALSKHQPNSAVQLVANFCRNPDDDEGIV-----C 267
QY 121 APGYKLGD---DLQCHPAV-----KF 139
DB 268 YVAKPGDFGVCNLYNCEAVEERTEDGLDESDRAIEGRTATSEYQTFNFRPTFGSGFA 327
QY 140 PCG-RPMKREKERSHTRDDEDEDQVPRLLIDGKTRRQDSNQVVL--DSKKKLAG 127
DB 328 DQGRP--LEFKSLIEDTERELLESYIDRIVESSDAEITMSQWVNLFRKSPDELLCG 385
QY 198 AVLTHPSWVLTAAHQM-----DES---KKLVRLGEYDLARWEK-WELLDLTIKEFVHPN 248
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QY 249 VS-KSTTDNDIALHLAQPATLSQTVPICTDPSGLAREINQAGEPTLVTCW-GYHSSR 306
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QY 307 EKEAKRRTFTVNLFIKIPVPHNCESEVSNMCAAIL---GDQDQACBDSGGP 363
DB 505 TANVGKQDPSVLOVNLPIVERPVCKDSTRIRITNNMFCAGYKPDGKGRKACBDSGGP 564

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QY 364 WV--ASFHGTWFLVGLVMSBEGCLAHNYGYTKYSRYLMI 403
DB 565 FVAKSPNNRNWYMGIVUSWEGCUDROCKTGFTTHVFLAKMI 606

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RESULT 82
PCT-US92-11357-3
; Sequence 3 Application PC/TUS9211357
; GENERAL INFORMATION:
; APPLICANT: Holly, Richard D.
; APPLICANT: Foster, Donald C.
; TITLE OF INVENTION: METHODS FOR PRODUCING THROMBIN
; NUMBER OF SEQUENCES: 48
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Townsend and Townsend
; STREET: One Market Plaza, Stewart Street Tower,
; CITY: San Francisco
; STATE: CA
; COUNTRY: USA
; ZIP: 94105
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: Patentin Release #1.0, Version #1.25
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: PCT/US92/11357
; FILING DATE: 19921230
; CLASSIFICATION:
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 07/660,701
; FILING DATE: 31-MAR-1992
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 07/816,281
; FILING DATE: 31-DEC-1991
; ATTORNEY/AGENT INFORMATION:
; NAME: Parmelee, Steven W
; REGISTRATION NUMBER: 31,990
; REFERENCE/DOCKET NUMBER: 13952-12-2
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: 206-467-9600
; TELEFAX: 415-543-5043
; INFORMATION FOR SEQ ID NO: 3:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 615 amino acids
; TYPE: AMINO ACID
; TOPOLOGY: linear
; MOLECULE TYPE: protein
; PCT-US92-11357-3

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Query Match      24.2%; Score 562.5; DB 5; Length 615;
Best Local Similarity 28.9%; Pred. No. 66-40;
Matches 168; Conservative 63; Mismatches 160; Indels 191; Gaps 24;

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QY 1 ANSFLERHSSIERECIEICDEFEAKEIFQVNDTLAENSKVADQCVLPLEHPCA 60
DB 37 ANTFLEVRKGNIERCEVEETCSYEAFALESSTADIVWAKYTAETART-PRDCLAA 95
QY 61 SLCCGHGTCLDIDGGS-----FSCDGRSGWGR-----FCQ 90
DB 96 ---CLBGNCAEGLGTVNGHVNI TRSGIECOL-WRSRYPHKEINSTTHPGADQENFPCA 151
QY 91 R-----EVSFLN-----CSLDNG 103
DB 152 NPDSSNTGPMCTTPTVTRQECSTIPVCGQDQVTVAMTPRSBSSVNLSPLEQCVPRDG 211
QY 104 G-----CTH-----YCL-----EEVGRRCSC 120
DB 212 QOYQRLAVTTTHGLPCLAMASQA KALSKHQPNSAVQLVANFCRNPDDDEGIV-----C 267
QY 121 APGYKLGD---DLQCHPAV-----KF 139

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Db      268 YVAGKPGDFGCDLANYCEBAVEETGDLDESDRAIGRTATSEYQTFEFPNRTGSGEA 327
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QY      140 PGG-RPMKMEKKSRLKADTDEQDQVDPRLLDGMTRRGGSPQVYLL-DSKKIACG 197
      |||
Db      328 DGLRP--LFEKSLDEKTERELLESYIDRIVEGDAEIGASPMQVWLFKSPQELLCG 385
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QY      198 AVLIHPSWVLTAAHGM-----DES---KLLVRLGEYDLRRMEK-WELDDIKKEVFNPN 248
      |||
Db      386 ASLISDRWVLTAAHCLLYPPMDKNNTENDLIVIGHSRTREYNIEKISMLEKTYIHR 445
      |||
QY      249 YS-KSTTNDIALHLAOPATLSQTVIPICLPDGLARELNOAGETLYTGMG-YHSSR 306
      |||
Db      446 YWRBNDRLDIALMKLKKPAPSDYIHPVCLPDRETA-ASLLQAGYKGYTGKMLKETW 504
      |||
QY      307 EKEAKRRTFYVNIPIKIPVYPHNEGSEVSNMSENLCAGL---GDRQDACEGSGGP 363
      |||
Db      505 TANVGQSPVLQVYVNIPIVERPCVDSRTIRITDMPFAGKXDEGRGDAECSGSP 564
      |||
QY      364 MV--ASFGTWFVLVGLVSWGEGGGLHNYGVYTKYSRYLDMT 403
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Db      565 FYKSPFNKRMYQMGIVSWGEGCDRDGKYGYTHVFLRKKMT 606
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RESULT 83
US-08-338-368-2
; Sequence 2, Application US/08338368
; Patent No. 6110721
; GENERAL INFORMATION:
; APPLICANT: GIBBS, CRAIG S.
; APPLICANT: LEUNG, LAWRENCE L. K.
; APPLICANT: TSIANG, MANUEL
; TITLE OF INVENTION: NOVEL POLYPEPTIDES AND COAGULATION
; TITLE OF INVENTION: THERAPY
; NUMBER OF SEQUENCES: 2
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: GILEAD SCIENCES, INC.
; STREET: 353 LAKESIDE DRIVE
; CITY: POSTER CITY
; STATE: CALIFORNIA
; COUNTRY: USA
; ZIP: 94404
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: Patent Release #1.0, Version #1.25
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/338,368
; FILING DATE: 14-NOV-1994
; CLASSIFICATION: 435
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 08/250,038
; FILING DATE: 10-JUN-1994
; ATTORNEY/AGENT INFORMATION:
; NAME: HENSLEY, MAX D.
; REGISTRATION NUMBER: 27,043
; REFERENCE/DOCKET NUMBER: 190.2
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: 415-574-3000
; TELEFAX: 415-573-4899
; INFORMATION FOR SEQ ID NO: 2:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 295 amino acids
; TYPE: amino acid
; TOPOLOGY: linear
; MOLECULE TYPE: protein
; US-08-338-368-2

```

Query Match 20.5%; Score 475.5; DB 3; Length 295;
 Best Local Similarity 39.9%; Pred. No. 6.8e-33;
 Matches 112; Conservative 43; Mismatches 105; Indels 21; Gaps 11;

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QY      141 CG-RPMKMEKKSRLKADTDEQDQVDPRLLDGMTRRGGSPQVYLL-DSKKIACGA 198
      |||
Db      9 GGLRP--LFEKSLDEKTERELLESYIDRIVEGDAEIGASPMQVWLFKSPQELLCGA 66
      |||
QY      199 VLIHPSWVLTAAHGM-----DES---KLLVRLGEYDLRRMEK-WELDDIKKEVFNPN 249
      |||
Db      67 SLISDRWVLTAAHCLLYPPMDKNNTENDLIVIGHSRTREYNIEKISMLEKTYIHR 126
      |||
QY      250 S-KSTTNDIALHLAOPATLSQTVIPICLPDGLARELNOAGETLYTGMG-YHSSR 307
      |||
Db      127 YWRBNDRLDIALMKLKKPAPSDYIHPVCLPDRETA-ASLLQAGYKGYTGKMLKETW 185
      |||
QY      308 KEAKRRTFYVNIPIKIPVYPHNEGSEVSNMSENLCAGL---GDRQDACEGSGGP 364
      |||
Db      186 ANVGKQSPVLQVYVNIPIVERPCVDSRTIRITDMPFAGKXDEGRGDAECSGSP 245
      |||
QY      365 V--ASFGTWFVLVGLVSWGEGGGLHNYGVYTKYSRYLDMT 403
      |||
Db      246 YKSPFNKRMYQMGIVSWGEGCDRDGKYGYTHVFLRKKMT 286
      |||

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RESULT 84
US-09-027-337-7
; Sequence 7, Application US/09027337B
; Patent No. 5972616
; GENERAL INFORMATION:
; APPLICANT: O'Brien, Timothy J.
; APPLICANT: Tanimoto, Hirotsoshi
; TITLE OF INVENTION: TADG-15: An Extracellular Serine Protease Overexpressed in
; TITLE OF INVENTION: Breast and Ovarian Cancers
; FILE REFERENCE: D6064
; CURRENT APPLICATION NUMBER: US/09/027,337B
; CURRENT FILING DATE: 1998-02-20
; NUMBER OF SEQ ID NOS: 13
; SEQ ID NO 7
; LENGTH: 255
; TYPE: PRT
; ORGANISM: Unknown
; FEATURE:
; OTHER INFORMATION: Serine protease catalytic domain of Factor 7 (Fact7)
; US-09-027-337-7

```

```

Query Match 20.4%; Score 473.5; DB 2; Length 255;
Best Local Similarity 37.9%; Pred. No. 8.4e-33;
Matches 96; Conservative 52; Mismatches 90; Indels 15; Gaps 5;

QY      169 RLINGKMTGRGSPQVYLLDSKKIACGAVLIHPSWVLTAAHGMDESK--KLLVRLGE 225
      |||
Db      1 RIVGKVCPRGCPQVYLLVNGAQL-CGGTINTINVSAAACFDKIKMKNINIAVLGE 59
      |||
QY      226 YDLRRMEKELDDIKKEVFNPNYSKSTTNDIALHLAOPATLSQTVIPICLPDGLAE 285
      |||
Db      60 HDLSEHDGDEQRRAVAVTIPSTYVGTNHDIALRLAQPVVLTDHVVPICLPERTFSS 119
      |||
QY      286 RELNQAQETLYTGMGSHSSSEKAAKRNITYVNIPIKIPVYPHNEGSEV-----SNMS 340
      |||
Db      120 RLIAFV-RFSLVSGWGLDGAFA-----LELWLVNPRMTDOLQSRKRVGDSNIT 173
      |||
QY      341 ENMLCAGILDDQDACEGDSGSPVVASFGTWFVLVGLVSWGEGGGLHNYGVYTKYSRYL 400
      |||
Db      174 EYMFCAGYSTGSDCKSGDSCGPHATHYGVYVLIIVGLVSWGQCAVGHFGYTVFVSQYI 233
      |||
QY      401 DWIGHIRDEAP 413
      |||
Db      234 EWLQKMRSEPR 246
      |||

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RESULT 85
 US-09-644-600-7
 ; Sequence 7, Application US/09644600
 ; Patent No. 6451500
 ; GENERAL INFORMATION:

Query Match	20.4%;	Score 473.5;	DB 4;	Length 255;
Best Local Similarity	37.9%;	Pred. No. 8.4e-33;		
Matches	96;	Conservative	52;	Mismatches 90;
			Indels	15;
			Gaps	5

Query Match	20.4%;	Score 473.5;	DB 1;	Length 655;
Best Local Similarity	28.3%;	Pred. No. 2.7e-32;		
Matches 141;	Conservative 58;	Mismatches 168;	Indels 131;	Gaps 18;

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QY 15 RCIEEICDPFEAKEIFQNVDDTLAFWSKHYDQGL-----VLEPHPCASLC 63
DB 195 KIOGTEKCEPDETRVEYLBSGDMAVAHQHVBQCEGGRTCWGSTHTACLSPLCN-- 252
QY 64 CGHGTG--IDGIGSFSCDCRSGMEGRFCQREVSFLNCSLDNG----- 103
DB 253 --GCTCHLIIVANGTTCACPPGFAGRLCNIEPD--ERCFLNGTGYRGVASTASGLSCLA 309
QY 104 -----GCTHYCL-----EYGV-----RCSC 120
DB 310 WNSDLIYQELHVSVAALGLGPHAYCRNPNDERPCVYKDSALSMERYCLACGS 369
QY 121 APGYKIGDILLQCHPAVKPCGRPWKMEKKRSHLKRDTEQEDQVDPRLIDGKTRRGD 180
DB 370 LTRVQSLPDLATLPEPASPGROACGRHKRKTFLR-----PRIGSSSLGPS 418
QY 181 SPW--QVVLIDSKKKLACGAVLIHPSWVLTAAHQMDS---KLLVRLGEYDLRMEKME 235
DB 419 HPMLAIIYIGDS---FCAGSLVHTCWMVSAHCFSPRDSVSVLQGHFNRTDVT 474
QY 236 LDDIYKEVFHENVSK-STTDNDIALHLAQP---ATLSQIYPICLPDSGLARELNG 290
DB 475 QTFGEIKYIPYTLVSVNPSDHDVLIRLKKGDRCATRSQFVQICLPEPG---STP 530
QY 291 AGQELTVTGMGY-----HSSREKAKRNTFVNLFIKLPVPHNECS--EWSMNVSE 341
DB 531 AGHKQIAGHGLDENNSGYSSSLREA-----LVPLVAHKKCSPEVYGVADISP 579
QY 342 NMLCAGILGRDACEGDSGGPVMASFHGTWFLVGVSWGCGGLIANTGYTYSYLD 401
DB 580 NMLCAGYFDCKSDACQDSGCPACCKNGVAYIGIISWDCGRLHKPGYTVYANVYD 639
QY 402 WIGHIRDEKAPQKSNAP 419
DB 640 WINDRIR--PPRLVAP 654

RESULT 88
US-08-448-937A-12
; Sequence 12, Application US/08448937A
; Patent No. 5677164
; GENERAL INFORMATION:
; APPLICANT: Takeshi SHIMOMURA et al.
; TITLE OF INVENTION: No. 5677164el Protein and Gene Encoding Said Protein
; NUMBER OF SEQUENCES: 14
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Wenderoth, Lind & Ponack
; STREET: 805 Fifteenth Street, N.W., #700
; CITY: Washington
; STATE: D.C.
; COUNTRY: U.S.A.
; ZIP: 20005
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Diskette, 5.25 inch,
; MEDIUM TYPE: 500 Kb Storage
; COMPUTER: IBM Compatible
; OPERATING SYSTEM: MS-DOS
; SOFTWARE: Wordperfect
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/448,937A
; FILING DATE: May 24, 1995
; CLASSIFICATION: 435
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: 08/148,910
; FILING DATE: No. 5677164ember 5, 1993
; ATTORNEY/AGENT INFORMATION:
; NAME: Warren W. Cheek, Jr.
; REGISTRATION NUMBER: 33,367
; REFERENCE/DOCKET NUMBER:
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: 202-371-8850
; TELEFAX: 202-371-8856
; TELEX:

```

```

; INFORMATION FOR SEQ ID NO: 12:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 655 amino acids
; TYPE: amino acid
; STRANDEDNESS: single
; TOPOLOGY: linear
; MOLECULE TYPE: protein
; ORIGINAL SOURCE:
; ORGANISM: human
US-08-448-937A-12

Query Match 20.4%; Score 473.5; DB 1; Length 655;
Best Local Similarity 28.3%; Pred. No. 2,7e-32;
Matches 141; Conservative 58; Mismatches 168; Indels 131; Gaps 18;

QY 15 RCIEEICDPFEAKEIFQNVDDTLAFWSKHYDQGL-----VLEPHPCASLC 63
DB 195 KIOGTEKCEPDETRVEYLBSGDMAVAHQHVBQCEGGRTCWGSTHTACLSPLCN-- 252
QY 64 CGHGTG--IDGIGSFSCDCRSGMEGRFCQREVSFLNCSLDNG----- 103
DB 253 --GCTCHLIIVANGTTCACPPGFAGRLCNIEPD--ERCFLNGTGYRGVASTASGLSCLA 309
QY 104 -----GCTHYCL-----EYGV-----RCSC 120
DB 310 WNSDLIYQELHVSVAALGLGPHAYCRNPNDERPCVYKDSALSMERYCLACGS 369
QY 121 APGYKIGDILLQCHPAVKPCGRPWKMEKKRSHLKRDTEQEDQVDPRLIDGKTRRGD 180
DB 370 LTRVQSLPDLATLPEPASPGROACGRHKRKTFLR-----PRIGSSSLGPS 418
QY 181 SPW--QVVLIDSKKKLACGAVLIHPSWVLTAAHQMDS---KLLVRLGEYDLRMEKME 235
DB 419 HPMLAIIYIGDS---FCAGSLVHTCWMVSAHCFSPRDSVSVLQGHFNRTDVT 474
QY 236 LDDIYKEVFHENVSK-STTDNDIALHLAQP---ATLSQIYPICLPDSGLARELNG 290
DB 475 QTFGEIKYIPYTLVSVNPSDHDVLIRLKKGDRCATRSQFVQICLPEPG---STP 530
QY 291 AGQELTVTGMGY-----HSSREKAKRNTFVNLFIKLPVPHNECS--EWSMNVSE 341
DB 531 AGHKQIAGHGLDENNSGYSSSLREA-----LVPLVAHKKCSPEVYGVADISP 579
QY 342 NMLCAGILGRDACEGDSGGPVMASFHGTWFLVGVSWGCGGLIANTGYTYSYLD 401
DB 580 NMLCAGYFDCKSDACQDSGCPACCKNGVAYIGIISWDCGRLHKPGYTVYANVYD 639
QY 402 WIGHIRDEKAPQKSNAP 419
DB 640 WINDRIR--PPRLVAP 654

RESULT 89
US-08-330-978-1
; Sequence 1, Application US/08330978
; Patent No. 5589571
; GENERAL INFORMATION:
; APPLICANT: King, Robert
; TITLE OF INVENTION: PROCESS FOR PRODUCTION OF INHIBITED
; NUMBER OF SEQUENCES: 4
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Morrison & Foerster
; STREET: 2000 Pennsylvania Avenue, NW
; CITY: Washington
; STATE: DC
; COUNTRY: USA
; ZIP: 20006-1888
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: PatentIn Release #1.0, Version #1.30

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1      NUMBER OF SEQUENCES: 4
2      CORRESPONDENCE ADDRESS:
3      ADDRESSEE: Morrison & Foerster
4      STREET: 2000 Pennsylvania Avenue, NW
5      CITY: Washington
6      STATE: DC
7      COUNTRY: USA
8      ZIP: 20006-1888
9
10     COMPUTER READABLE FORM:
11     MEDIUM TYPE: floppy disk
12     COMPUTER: IBM PC compatible
13     OPERATING SYSTEM: PC-DOS/MS-DOS
14     SOFTWARE: Patentin Release #1.0, Version #1.30
15     CURRENT APPLICATION DATA:
16     APPLICATION NUMBER: US/08/474,042
17     FILING DATE: 07-JUN-1995
18     CLASSIFICATION: 530
19
20     PRIOR APPLICATION DATA:
21     APPLICATION NUMBER: US 08/484,558
22     FILING DATE: 07-JUN-1995
23     ATTORNEY/AGENT INFORMATION:
24     NAME: Muraahide, Kate H.
25     REGISTRATION NUMBER: 29,959
26     REFERENCE/DOCKET NUMBER: 2803-0007.02
27     TELECOMMUNICATION INFORMATION:
28     TELEPHONE: (202)887-1500
29     TELEFAX: (202)822-0168
30     TELEX: 90-4030 MRSNFOEWSH
31     INFORMATION FOR SEQ ID NO: 1:
32     SEQUENCE CHARACTERISTICS:
33     LENGTH: 306 amino acids
34     TYPE: amino acid
35     STRANDEDNESS: single
36     TOPOLOGY: linear
37
38     FEATURE:
39     NAME/KEY: Disulfide-bond
40     LOCATION: 59..64
41
42     FEATURE:
43     NAME/KEY: Disulfide-bond
44     LOCATION: 79..95
45
46     FEATURE:
47     NAME/KEY: Disulfide-bond
48     LOCATION: 160
49
50     OTHER INFORMATION: /note="Disulfide linkage to
51     OTHER INFORMATION: residue 132 of SEQ ID NO:2"
52
53     FEATURE:
54     NAME/KEY: Disulfide-bond
55     LOCATION: 208..222
56
57     FEATURE:
58     NAME/KEY: Disulfide-bond
59     LOCATION: 233..261
60
61     US-08-474-042-1
62
63     Query Match      20.2%; Score 469; DB 1; Length 306;
64     Best Local Similarity 34.8%; Pred. No. 2.6e-32;
65     Matches 96; Conservative 60; Mismatches 98; Indels 22; Gaps 5
66
67     QY      159  TDEDFQVD-----PRLIDKMTGRGDSPMQVVLIDSKKGLACAVLIHHSW 205
68     DB      29  TENFDLDFNLOTQPERGDNNTLRIVGQCKGBCQWQALLINENHBCGGTILTSFY 88
69
70     QY      206  VLTAAHOMDSKGLVHLYGVDLRRMEKWEILDLDIKVFWHPNTSKSTTNDIDIALHLAQ 265
71     DB      89  ILTFAHGLVQARFQVAVGDRNTEQEGEGEAVHSEVVIKHNRFETKETDPIAVLRKLT 148
72
73     QY      266  PATTSQTYPIPLDPSGLARHINQAGET-LVTGCHYSSREKARKNTPVLIPIIP 324
74     DB      149  PIFRNNVVAAPLPERMASTLT--MTQKTIIVSGFKTHKXGQSTR-----LKKLIEVP 201
75
76     QY      325  VVPEHNECESEWMSNVMSENMLCAGIIGLBDQDACEGDSGGPMVASFHGTMFLVGLNSWGBGC 384
77     DB      202  VYDSDSGKSSFFILTNMFCAGVDTKQEDACCGQDSGGHPTRFKDIFYFVTVGIVSWGBGC 261

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206 VLTAAHCMDESKLLVRLGEYDLRWEKWELELDIKEVFVHPNYSKSTNDNDIALHIAQ 265

OTHER INFORMATION: residue 132 of SEQ ID NO:2"

OTHER INFORMATION: residue 132 of SEQ ID NO:2"

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      ; INFORMATION FOR SEQ ID NO: 3:

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FILING DATE: 07-JUN-1995

NUMBER OF SEQUENCES: 4
CORRESPONDENCE ADDRESS:
ADDRESSEE: Morrison & Foerster

DB 61 QEGGGAHVHEVYVYKHNRFKTYDPIAVLRKPTIFPRMVAAPACLPERDWAESTL- 119
QY 290 QAGQET-LVTGNGYHSSREKAKRRTVYVNFYKIPVYVHNECEVMSNMVSENMLCAGI 348
DB 120 -MTQKIGVSGRTHKRGOSTR-----LKMLEVYVDNRNSCKLSSFTITQMFCAGY 173
QY 349 LGRBODACEGSGGPMVASFHGTWFLVGLVSMGCGLLHNYGVYTKVRYLDMJHGR 408
DB 174 DTQEDACQDSGSGPHYTRFKDTYVGTGIVSMGCGARKKGYITVTAFKWDISMK 233
QY 409 DKEAPQ-KSNAP 419
DB 234 TRGLPKAKSHAP 245
RESULT 98
US-08-330-978-4
; Sequence 4, Application US/08330978
; Patent No. 5589571
; GENERAL INFORMATION:
; APPLICANT: King, Robert
; TITLE OF INVENTION: PROCESS FOR PRODUCTION OF INHIBITED
; NUMBER OF SEQUENCES: 4
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Morrison & Foerster
; STREET: 2000 Pennsylvania Avenue, NW
; CITY: Washington
; STATE: DC
; COUNTRY: USA
; ZIP: 20006-1888
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: Patentin Release #1.0, Version #1.30
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/330,978
; FILING DATE: 28-OCT-1994
; CLASSIFICATION: 530
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 08/484,558
; FILING DATE: 07-JUN-1995
; ATTORNEY/AGENT INFORMATION:
; NAME: Murashige, Kate H.
; REGISTRATION NUMBER: 29,959
; REFERENCE/DOCKET NUMBER: 2803-0007.02
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: (202)887-1500
; TELEFAX: (202)822-0168
; TELEX: 90-4030 MRSNFORSMH
; INFORMATION FOR SEQ ID NO: 4:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 241 amino acids
; TYPE: amino acid
; STRANDEDNESS: single
; TOPOLOGY: linear
; FEATURE:
; NAME/KEY: Disulfide-bond
; LOCATION: 7..12
; FEATURE:
; NAME/KEY: Disulfide-bond
; LOCATION: 27..43
; FEATURE:
; NAME/KEY: Disulfide-bond
; LOCATION: 108
; OTHER INFORMATION: /note= "Disulfide linkage with
; OTHER INFORMATION: residue 132 of SEQ ID NO:2"
; FEATURE:
; NAME/KEY: Disulfide-bond
; LOCATION: 156..170
; FEATURE:
; NAME/KEY: Disulfide-bond

LOCATION: 181..209
US-08-330-978-4
Query Match 19.6%; Score 456; DB 1; Length 241;
Best Local Similarity 35.4%; Pred. No. 2.5e-31;
Matches 87; Conservative 58; Mismatches 93; Indels 8; Gaps 3;
QY 170 LIDKMTIRGDSPMQVVLDSKKKLLACGAVLIHPSWLTNAHCKMDSKXLLVRLGYDAR 229
DB 1 IVGGQCEKCGECPYQALLINENEGCGTLLSFYLTNAHCLYQARFVVRGRNTE 60
QY 230 RWEKELDIDIKVEVFPNYSKSTDDNDIALHACPAITISQTYPTLPSGLARELN 289
DB 61 QEGGGAHVHEVYVYKHNRFKTYDPIAVLRKPTIFPRMVAAPACLPERDWAESTL- 119
QY 290 QAGQET-LVTGNGYHSSREKAKRRTVYVNFYKIPVYVHNECEVMSNMVSENMLCAGI 348
DB 120 -MTQKIGVSGRTHKRGOSTR-----LKMLEVYVDNRNSCKLSSFTITQMFCAGY 173
QY 349 LGRBODACEGSGGPMVASFHGTWFLVGLVSMGCGLLHNYGVYTKVRYLDMJHGR 408
DB 174 DTQEDACQDSGSGPHYTRFKDTYVGTGIVSMGCGARKKGYITVTAFKWDISMK 233
QY 409 DKEAPQ 414
DB 234 TRGLPK 239
RESULT 99
US-08-474-042-4
; Sequence 4, Application US/08474042
; Patent No. 5589572
; GENERAL INFORMATION:
; APPLICANT: King, Robert
; TITLE OF INVENTION: PROCESS FOR PRODUCTION OF INHIBITED
; NUMBER OF SEQUENCES: 4
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Morrison & Foerster
; STREET: 2000 Pennsylvania Avenue, NW
; CITY: Washington
; STATE: DC
; COUNTRY: USA
; ZIP: 20006-1888
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: Patentin Release #1.0, Version #1.30
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/474,042
; FILING DATE: 07-JUN-1995
; CLASSIFICATION: 530
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 08/484,558
; FILING DATE: 07-JUN-1995
; ATTORNEY/AGENT INFORMATION:
; NAME: Murashige, Kate H.
; REGISTRATION NUMBER: 29,959
; REFERENCE/DOCKET NUMBER: 2803-0007.02
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: (202)887-1500
; TELEFAX: (202)822-0168
; TELEX: 90-4030 MRSNFORSMH
; INFORMATION FOR SEQ ID NO: 4:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 241 amino acids
; TYPE: amino acid
; STRANDEDNESS: single
; TOPOLOGY: linear
; FEATURE:
; NAME/KEY: Disulfide-bond
; LOCATION: 7..12

```

FEATURE:
NAME/KEY: Disulfide-bond
LOCATION: 27..43
FEATURE:
NAME/KEY: Disulfide-bond
LOCATION: 108
OTHER INFORMATION: /note="Disulfide linkage with
OTHER INFORMATION: residue 132 of SEQ ID NO:2"
FEATURE:
NAME/KEY: Disulfide-bond
LOCATION: 156..170
FEATURE:
NAME/KEY: Disulfide-bond
LOCATION: 181..209
US-08-474-042-4

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Query Match 19.6%; Score 456; DB 1; Length 241;
Best Local Similarity 35.4%; Pred. No. 2.5e-31;
Matches 87; Conservative 58; Mismatches 93; Indels 8; Gaps 3;

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QY 170 LDGKMTBRGDSFMQVVLDSKKKLAGAVLHPSVLTAAHCDSEKLLVRLGEYDLR 229
DB 1 IVGQECDCBCEWQALINENBFGCGTILSEFYILTAHCLOYAKRFKRVGDNRTE 60
QY 230 RMEKELDLDIKEVFNHNSKSTTNDIALHLAQPATLSQTVIPCLIPDSGLARELN 289
DB 61 QEEGGEAVHEVEVILKHNRFKETYDFDIAYLRLKTPITPRMNVAPACLPEDMAESTL- 119
QY 230 QAGQET-LVTGNGYHSSREKAKNRFTVNLTKIPVPHNECEVSNVSNMLCAGI 348
DB 120 -MTQKTGIVSGFRGHEKRGQSTR-----LKMLEVYVDNRSCLSSTFITQWFCAGY 173
QY 349 LGDRDACEGDSGGPMVASFHGTWFLVGLVSGEGCLLHNYGYTVKSRVYDLMTHGHR 408
DB 174 DTKQEDACQDSGGPVTFRKQTYFTVGIWGBGCAKRGKGYITKVTAFKIDMSMK 233
QY 409 DKEAPQ 414
DB 234 TRGLPK 239

```

```

RESULT 100
US-08-484-558-4
Sequence 4, Application US/08484558
Patent No. 560223
GENERAL INFORMATION:
APPLICANT: King, Robert
TITLE OF INVENTION: PROCESS FOR PRODUCTION OF INHIBITED
TITLE OF INVENTION: FORMS OF ACTIVATED BLOOD FACTORS
NUMBER OF SEQUENCES: 4
CORRESPONDENCE ADDRESS:
ADDRESSEE: Morrison & Foerster
STREET: 2000 Pennsylvania Avenue, NW
CITY: Washington
STATE: DC
COUNTRY: USA
ZIP: 20006-1888
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/484,558
FILING DATE: 07-JUN-1995
CLASSIFICATION: 530
ATTORNEY/AGENT INFORMATION:
NAME: Murabigie, Kate H.
REGISTRATION NUMBER: 29,959
REFERENCE/DOCKET NUMBER: 2803-0007.02
TELECOMMUNICATION INFORMATION:
TELEPHONE: (202) 887-1500
TELEFAX: (202) 822-0168

```

```

TELEX: 90-4030 MRSNFOERSM
INFORMATION FOR SEQ ID NO: 4:
SEQUENCE CHARACTERISTICS:
LENGTH: 241 amino acids
TYPE: amino acid
STRANDEDNESS: single
TOPOLOGY: linear
FEATURE:
NAME/KEY: Disulfide-bond
LOCATION: 7..12
FEATURE:
NAME/KEY: Disulfide-bond
LOCATION: 27..43
FEATURE:
NAME/KEY: Disulfide-bond
LOCATION: 108
OTHER INFORMATION: /note="Disulfide linkage with
OTHER INFORMATION: residue 132 of SEQ ID NO:2"
FEATURE:
NAME/KEY: Disulfide-bond
LOCATION: 156..170
FEATURE:
NAME/KEY: Disulfide-bond
LOCATION: 181..209
US-08-484-558-4

```

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Query Match 19.6%; Score 456; DB 1; Length 241;
Best Local Similarity 35.4%; Pred. No. 2.5e-31;
Matches 87; Conservative 58; Mismatches 93; Indels 8; Gaps 3;

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QY 170 LDGKMTBRGDSFMQVVLDSKKKLAGAVLHPSVLTAAHCDSEKLLVRLGEYDLR 229
DB 1 IVGQECDCBCEWQALINENBFGCGTILSEFYILTAHCLOYAKRFKRVGDNRTE 60
QY 230 RMEKELDLDIKEVFNHNSKSTTNDIALHLAQPATLSQTVIPCLIPDSGLARELN 289
DB 61 QEEGGEAVHEVEVILKHNRFKETYDFDIAYLRLKTPITPRMNVAPACLPEDMAESTL- 119
QY 230 QAGQET-LVTGNGYHSSREKAKNRFTVNLTKIPVPHNECEVSNVSNMLCAGI 348
DB 120 -MTQKTGIVSGFRGHEKRGQSTR-----LKMLEVYVDNRSCLSSTFITQWFCAGY 173
QY 349 LGDRDACEGDSGGPMVASFHGTWFLVGLVSGEGCLLHNYGYTVKSRVYDLMTHGHR 408
DB 174 DTKQEDACQDSGGPVTFRKQTYFTVGIWGBGCAKRGKGYITKVTAFKIDMSMK 233
QY 409 DKEAPQ 414
DB 234 TRGLPK 239

```

```

RESULT 101
US-08-774-592-4
Sequence 4, Application US/08774592
Patent No. 570699
GENERAL INFORMATION:
APPLICANT: King, Robert
TITLE OF INVENTION: PROCESS FOR PRODUCTION OF INHIBITED
TITLE OF INVENTION: FORMS OF ACTIVATED BLOOD FACTORS
NUMBER OF SEQUENCES: 4
CORRESPONDENCE ADDRESS:
ADDRESSEE: Morrison & Foerster
STREET: 2000 Pennsylvania Avenue, NW
CITY: Washington
STATE: DC
COUNTRY: USA
ZIP: 20006-1888
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.30
CURRENT APPLICATION DATA:

```

[illegible]

```

; STATE: MA
; COUNTRY: USA
; ZIP: 02109
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: ASCII (text)
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/09/410,882
; FILING DATE:
; CLASSIFICATION:
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US/08/558,269
; FILING DATE: 13-NOV-1995
; APPLICATION NUMBER: US 07/847,800
; FILING DATE: 06-MAR-1992
; ATTORNEY/AGENT INFORMATION:
; NAME: Vincent, Matthew P.
; REGISTRATION NUMBER: 36,709
; REFERENCE/DOCKET NUMBER: CRI-001CP2
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: (617) 227-7400
; TELEFAX: (617) 227-5941
; INFORMATION FOR SEQ ID NO: 10:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 376 amino acids
; TYPE: amino acid
; TOPOLOGY: linear
; MOLECULE TYPE: protein
; US-09-410-882-10

Query Match      19.3%; Score 448; DB 3; Length 376;
Best Local Similarity 36.7%; Pred. No.2e-30;
Matches 104; Conservative 45; Mismatches 96; Indels 38; Gaps 10;

QY 158 DTEQDQDQVD-----PRLIDGKMTGRGSPMQVLL-DSKKLIAC 196
DB 86 EVEDQKEVQLVFGILTANSDTHLHGQSUTLIVGSDAELIGSPMQVLPFKSPQELLC 145
QY 197 GAVLIHPSWLTIAHGM-----DES--KLLVRLGEIDARKREK-WEIDDDIYEVVHP 247
DB 146 GASLISDRWLTAAHCLTYPMDNFTENDLVRIGKISRTYERIEKISMLEKITYHP 205
QY 248 NYS-KSTTDNDIALHLAOPATLSQTVPICLPDSGLAEREINOAQETLVTGNG-YHSS 305
DB 206 RYNRENLDIDIALMKLTKKPAFSDYIHPVCLPDRFTA-ASLLAQGYKRYTGMNLYET 264
QY 306 REKAKKRTFVINFIKIPVVPANECEVSNMVSNNLCAGIL--GRODACEGDSGG 362
DB 265 WTAVNGKQPSVLTQVNLPIVERPVCDSSTRIRITDNMFCAGYKPEDGKRGDACEGDSGG 324
QY 363 PMV--ASPHGTWFLVGLVSMGSGGLAHNGYTVTSRYLMI 403
DB 325 PFMKSPNNRMKTYMGISVMBGCDRDKGTGYTHVFLKMI 367

RESULT 104
US-08-944-483-52
; Sequence 52, Application US/08944483
; Patent No. 6232456
; GENERAL INFORMATION:
; APPLICANT: COHEN, MAURICE
; APPLICANT: COLPITTS, TRACEY L.
; APPLICANT: FRIEDMAN, PAULA N.
; APPLICANT: GRANADOS, EDWARD N.
; APPLICANT: KLAAS, MICHAEL R.
; APPLICANT: RUSSELL, JOHN C.
; APPLICANT: STEWART, KENT D.
; APPLICANT: STROUPE, STEVEN D.
; TITLE OF INVENTION: NOVEL SERINE PROTEASE REAGENTS
; TITLE OF INVENTION: AND METHODS USEFUL FOR DETECTING AND TREATING DISEASES
; TITLE OF INVENTION: OF THE PROSTATE

```

```

; NUMBER OF SEQUENCES: 76
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Abbott Laboratories
; STREET: 100 Abbott Park Road
; CITY: Abbott Park
; STATE: IL
; COUNTRY: USA
; ZIP: 60064-3500
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Diskette
; COMPUTER: IBM Compatible
; OPERATING SYSTEM: DOS
; SOFTWARE: FastSeq for Windows Version 2.0
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/944,483
; FILING DATE:
; CLASSIFICATION: 424
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER:
; FILING DATE:
; ATTORNEY/AGENT INFORMATION:
; NAME: Becker, Cheryl L.
; REGISTRATION NUMBER: 35,441
; REFERENCE/DOCKET NUMBER: 6183-US-01
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: 847/935-1729
; TELEFAX: 847/938-2623
; TELEX:
; INFORMATION FOR SEQ ID NO: 52:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 259 amino acids
; TYPE: amino acid
; STRANDEDNESS: single
; TOPOLOGY: linear
; MOLECULE TYPE: No. 6232456e
; US-08-944-483-52

Query Match      19.1%; Score 444; DB 3; Length 259;
Best Local Similarity 39.8%; Pred. No.2.9e-30;
Matches 100; Conservative 41; Mismatches 92; Indels 18; Gaps 9;

QY 170 LIDGKTRGRGSPMQVLL-DSKKLIACGAVLIHPSWLTIAHGM-----DES--KLL 220
DB 1 IVEGSDAELIGSPMQVLPFRSPQELCGASLISDRWLTAAHCLTYPMDNFTENDL 60
QY 221 VRLGEVLDARKREK-WEIDDDIYEVVHPNYS-KSTTDNDIALHLAOPATLSQTVPICL 278
DB 61 VRIKGKSTRYERIEKISMLEKITYHPRYNRENLDIDIALMKLTKKPAFSDYIHPVCL 120
QY 279 PDSGLAEREINOAQETLVTGNG-YHSSREKAKRRTFVINFIKIPVVPANECEVSN 337
DB 121 PDREFTA-ASLLAQGYKARYTGMNLYETWAVNGKQPSVLTQVNLPIVERPVCDSSTRI 179
QY 338 MUSENNLCAGIL--GRODACEGDSGGPMV--ASPHGTWFLVGLVSMGSGGLAHNGV 392
DB 180 RITDNMFCAGYKPEDGKRGDACEGDSGGPFVMSPPNNRMKTYMGISVMBGCDRDKGTGYF 239
QY 393 YTKVSRYLDMI 403
DB 240 YTHVRLKMI 250

RESULT 105
US-08-944-483-49
; Sequence 49, Application US/08944483
; Patent No. 6232456
; GENERAL INFORMATION:
; APPLICANT: COHEN, MAURICE
; APPLICANT: COLPITTS, TRACEY L.
; APPLICANT: FRIEDMAN, PAULA N.
; APPLICANT: GRANADOS, EDWARD N.
; APPLICANT: KLAAS, MICHAEL R.
; APPLICANT: RUSSELL, JOHN C.

```



```

APPLICANT: STEWART, KENT D.
APPLICANT: STROUPE, STEVEN D.
TITLE OF INVENTION: NOVEL SERINE PROTEASE REAGENTS
TITLE OF INVENTION: AND METHODS USEFUL FOR DETECTING AND TREATING DISEASES
TITLE OF INVENTION: OF THE PROSTATE
NUMBER OF SEQUENCES: 76
CORRESPONDENCE ADDRESS:
ADDRESSER: Abbott Laboratories
STREET: 100 Abbott Park Road
CITY: Abbott Park
STATE: IL
COUNTRY: USA
ZIP: 60064-3500
COMPUTER READABLE FORM:
MEDIUM TYPE: Diskette
COMPUTER: IBM Compatible
OPERATING SYSTEM: DOS
SOFTWARE: FASTSEQ for Windows Version 2.0
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/944,483
FILING DATE:
CLASSIFICATION: 424
PRIOR APPLICATION DATA:
APPLICATION NUMBER:
FILING DATE:
ATTORNEY/AGENT INFORMATION:
NAME: Becker, Cheryl L.
REGISTRATION NUMBER: 35,441
REFERENCE/DOCKET NUMBER: 6183.US.01
TELECOMMUNICATION INFORMATION:
TELEPHONE: 847/935-1729
TELEFAX: 847/938-2623
TELEX:
INFORMATION FOR SEQ ID NO: 49:
SEQUENCE CHARACTERISTICS:
LENGTH: 247 amino acids
TYPE: amino acid
STRANDEDNESS: single
TOPOLOGY: linear
MOLECULE TYPE: No. 6232456e
US-08-944-483-49

Query Match          19.0%; Score 441; DB 3; Length 247;
Best Local Similarity 35.3%; Pred. No. 4,9e-30;
Matches 89; Conservative 57; Mismatches 94; Indels 12; Gaps 5;

QY 170 LIDGKTRGDSFWVYLLDSKKKLAGAVLIHPSVLTAAHMCDESKKLLVRLGEYDILR 229
   : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : :
Db 1 IVGQCKDCEPCWQALLINENEGFCGGTILSEFYLLTAHCLYQAKGR--EGDRNTE 57

QY 230 RWEKWEJLDIKEVYHPNYSKSTNDIALHLAOPATLSQTIPICLPDSGLARELN 289
   : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : :
Db 58 QEBGARVHEVYVTKNRFTKETYFDIAYVRLKRTPTTRAMVAPACLPKCMASSTL- 116

QY 290 QAGGET-LVTGMGXHSREKARNRTFVLNFIKIPVPHNCEVMNVSNNICAGI 348
   : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : :
Db 117 -MTCKGIYSGFRHEKRGQSTR-----LKKLEVPYVDNSCKSSFFITQMFCAQY 170

QY 349 LGRDQACGDSGSGMVASFHGTMFVLGVVSGGCGLLINVCYTKYSKRLDPIHCHIR 408
   : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : :
Db 171 DTQGEDACQDSGGGHVTRFDYTFVTLGVVSGGCGAKKRGYIYKVTAFLEKMDISMK 230

QY 409 DKEAPQ-KSWAP 419
   : : : : :
Db 231 TRGIPIAKSHAP 242

RESULT 106
US-08-148-910-1
; Sequence 1, Application US/08148910
; Patent No. 546593
; GENERAL INFORMATION:
; APPLICANT: Takeshi SHIMOMURA et al.
```

```

TITLE OF INVENTION: No. 546593e1 Protein and Gene Encoding Said Protein
NUMBER OF SEQUENCES: 14
CORRESPONDENCE ADDRESS:
ADDRESSER: Wenderoth, Lind & Bonack
STREET: 805 Fifteenth Street, N.W., #700
CITY: Washington
STATE: D.C.
COUNTRY: U.S.A.
ZIP: 20005
COMPUTER READABLE FORM:
MEDIUM TYPE: Diskette, 5.25 inch,
MEDIUM TYPE: 500 Kb Storage
COMPUTER: IBM Compatible
OPERATING SYSTEM: MS-DOS
SOFTWARE: Wordperfect
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/148,910
FILING DATE: No. 546593member 5, 1993
CLASSIFICATION: 435
PRIOR APPLICATION DATA:
APPLICATION NUMBER:
FILING DATE:
ATTORNEY/AGENT INFORMATION:
NAME: Warren W. Creek, Jr.
REGISTRATION NUMBER: 33,367
REFERENCE/DOCKET NUMBER:
TELECOMMUNICATION INFORMATION:
TELEPHONE: 202-371-8850
TELEFAX: 202-371-8856
TELEX:
INFORMATION FOR SEQ ID NO: 1:
SEQUENCE CHARACTERISTICS:
LENGTH: 300 amino acids
TYPE: amino acid
STRANDEDNESS: single
TOPOLOGY: linear
MOLECULE TYPE: protein
ORIGINAL SOURCE:
ORGANISM: human
US-08-148-910-1

Query Match          18.8%; Score 437; DB 1; Length 300;
Best Local Similarity 33.5%; Pred. No. 1,4e-29;
Matches 111; Conservative 49; Mismatches 115; Indels 56; Gaps 12;

QY 108 YCLBEVGMRCSCAGYGLGDDLLQCHPAVYKPCGRPMKMEKKSRLKRPTEQEDQYD 167
   : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : :
Db 6 YCRLEA-----CSLIRVQLSPDLATLPEPASFGQACGRHKKRTFLR----- 50

QY 168 PRLLDGKTRGDSFW--QVVLDSKKKLAGAVLIHPSVLTAAHMCDESKKLLVRL 222
   : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : :
Db 51 PRILGSSSLPSGSHWLAAYIGDS---FCAGSLVETCWVVASAHCPSHSPPPDSVSVV 106

QY 222 LGEVDLARMWEJLDIKEVYHPNYSK-STNDIALHLAOP-----ATLSQTIPICL 277
   : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : :
Db 107 LGQHFNRITDVTQTPGLEKITPYTLISVFNPSDHDVILRLKKKDRCATRSQFVPIIC 166

QY 278 LPSDGLARELNQAGETLVYGMVY-----HSSREKARNRTFVLNFIKIPVPHNE 330
   : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : :
Db 167 LPEPQ-----STFPAGKQIAGWGHIDENVSGYSSSLREA-----LVPLVADHK 211

QY 331 GS--EWSNNVSNENMICAGIILGRDQACGDSGSGMVASFHGTMFVLGVVSGGCGLLH 388
   : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : :
Db 212 CSSPEVYGADISPNMILCAGYFDCKSDACQDSGGGLACERGVAYLYGLISWGGCGRLH 271

QY 389 NYGYTYYSRYLDMIHGHTRDXEAPQKSWAP 419
   : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : :
Db 272 KPQVYTRVANYDMINDIR---PPRLVAP 299

RESULT 107
US-08-448-937A-1
; Sequence 1, Application US/08448937A
```

Patent No. 5677164
GENERAL INFORMATION:
APPLICANT: Takeshi SHIMOMURA et al.
TITLE OF INVENTION: No. 5677164el Protein and Gene Encoding Said Protein
NUMBER OF SEQUENCES: 14
CORRESPONDENCE ADDRESS:
ADDRESSEE: Wenderoth, Lind & Ponack
STREET: 805 Fifteenth Street, N.W., #100
CITY: Washington
STATE: D.C.
COUNTRY: U.S.A.
ZIP: 20005
COMPUTER READABLE FORM:
MEDIUM TYPE: Diskette, 5.25 inch,
MEDIUM TYPE: 500 Kb Storage
COMPUTER: IBM Compatible
OPERATING SYSTEM: MS-DOS
SOFTWARE: Wordperfect
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/448,937A
FILING DATE: May 24, 1995
CLASSIFICATION: 435
PRIOR APPLICATION DATA:
APPLICATION NUMBER: 08/148,910
FILING DATE: No. 5677164el December 5, 1993
ATTORNEY/AGENT INFORMATION:
NAME: Warren M. Cheek, Jr.
REGISTRATION NUMBER: 33,367
REFERENCE/DOCKET NUMBER:
TELECOMMUNICATION INFORMATION:
TELEPHONE: 202-371-8850
TELEFAX: 202-371-8856
TELEX:
INFORMATION FOR SEQ ID NO: 1:
SEQUENCE CHARACTERISTICS:
LENGTH: 300 amino acids
TYPE: amino acid
STRANDEDNESS: single
TOPOLOGY: linear
MOLECULE TYPE: protein
ORIGINAL SOURCE:
ORGANISM: human
US-08-448-937A-1

Query Match 18.8%; Score 437; DB 1; Length 300;
Best Local Similarity 33.5%; Pred. No. 1,4e-29;
Matches 111; Conservative 49; Mismatches 115; Indels 56; Gaps 12;

QY 108 YLLEEVGNFRCSAPGYKLDLQCHPAVKPCGRPWKMEKKRSHLKTDEQDQVD 167
DB 6 YRLLEA-----CESLTVQLSPDLATLPEPASFGRAQGRHKRKTFLR----- 50
QY 168 PRLDNGKTRRGDSPP--QVVLDSKKKLAQGVLIHPSVLTAAHOMDES---KKLLVR 222
DB 51 PRIGSSSLPGSHWLAALVIGDS---PCAGSLVHTCWVWSAHLFSSSPRDSVV 106
QY 223 LGEYDLRREKELDLIDKEVFNHNSK-STDNNDIALHLAOP---ATLSQTLVIG 277
DB 107 LGCHFPNRTTYVOTGIEKRYPLTVSVNPSBDHVLIRLKKKGRGRTSSQVPGIC 166
QY 278 LDDSGLAEREINQAGETLVGMWY-----HSSREKAKRNNTPVLANITKIPVPPNE 330
DB 167 LPEPG-----STFPAGHKQIAGWGHLDENVSGYSSSLRBA-----LIVPLVAHK 211
QY 331 CS--FVMSNVSSENNLCAGILGRDACEGSSGSPVASFHGTWELVGLVSGEGGLH 388
DB 212 CSPEVYAGADISPMNLCAGYFDCKSDACQDSSGPLACCKKNVAVLIGIISWGDGGLH 271
QY 389 NGVYTKVSRYLDMVHGHTRDKEAFQKSMAP 419
DB 272 KPGVTVRVANVVDWINDRIR---PRLRLVRI 299

RESULT 108
US-09-004-731-30
Sequence 30, Application US/09004731
Patent No. 617258
GENERAL INFORMATION:
APPLICANT: Wa Hunter, Shirley
APPLICANT: Stiegler, Gary
APPLICANT: Gaines, Patrick J.
TITLE OF INVENTION: FLEA PROTEASE PROTEINS, NUCLEIC ACID
TITLE OF INVENTION: MOLECULES AND USES THEREOF
NUMBER OF SEQUENCES: 103
CORRESPONDENCE ADDRESS:
ADDRESSEE: Sheridan Ross P.C.
STREET: 1700 Lincoln Street, Suite 3500
CITY: Denver
STATE: Colorado
COUNTRY: USA
ZIP: 80203
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/09/004,731
FILING DATE:
CLASSIFICATION:
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US/08/749,699
FILING DATE:
ATTORNEY/AGENT INFORMATION:
NAME: Cornell, Gary J.
REGISTRATION NUMBER: 32,020
REFERENCE/DOCKET NUMBER: 2618-25-C3
TELECOMMUNICATION INFORMATION:
TELEPHONE: (303) 863-9700
TELEFAX: (303) 863-0223
INFORMATION FOR SEQ ID NO: 30:
SEQUENCE CHARACTERISTICS:
LENGTH: 400 amino acids
TYPE: amino acid
TOPOLOGY: linear
MOLECULE TYPE: protein
US-09-004-731-30

Query Match 18.7%; Score 435; DB 3; Length 400;
Best Local Similarity 33.0%; Pred. No. 2.9e-29;
Matches 108; Conservative 45; Mismatches 135; Indels 50; Gaps 10;

QY 80 CRSGMEGRFCQREVSFLNCSLDNGCCTHYCLAEVGNFRCSAPGYKLDLQCHPAVNF 139
DB 94 CRKGRRECGISLIS---CVLGGGRPLDLCGKWTW---SCVDRDIRPBPQHOGALONA 147
QY 140 PGRPWKMEKKRSHLKTDEQDQVDPRLDNGKTRRGDSPPQVVLDS---KKLLAC 196
DB 148 TCGELVTRSN-----RIVGSHSTGSHWLAALISGLSKKLSL 188
QY 197 GAVLIHPSVLTAAHOM--DESKLLVRLGXYDLR---RWEKELDLIDKEVFNHNS 250
DB 189 GALVSDRWVITAAHCVATTNPSNLKVLGWDVDRDRLNHEEYVALERE--VHPYS 246
QY 251 KSTTNDIALLHLAOPATLSQTLVPLCLPDSGLAEREINQAGETLVGMWYSSREKXA 310
DB 247 PTDPRNDVALVRLTRVIFKQHLPLCLP-----HKQKLAGMATVAGW---RTRIS 297
QY 311 KKRRTVNLNFIKIPVFNHNSCEVW-----SNVVSSENNLCAGILGRDACEGSSGSPV 365
DB 298 QSTVPVAVLQEVVEVETVNERCQRMFLAAGRETLIHDFVLACGYKSGRDSQGDSSGGLI 357
QY 366 ASFHGTWELVGLVSGEGGLHNYGVYTKVSRYLDMV 403
DB 358 MQIEGRRLVGLVSGIGCGREHLPGVYTNLQKELPWI 395

RESULT 109

US-09-004-731-33
Sequence 33, Application US/09004731
Patent No. 6177258
GENERAL INFORMATION:
APPLICANT: Wu Hunter, Shirley
APPLICANT: Stiegler, Gary
APPLICANT: Gaines, Patrick J.
TITLE OF INVENTION: FLEA PROTEASE PROTEINS, NUCLEIC ACID
TITLE OF INVENTION: MOLECULES AND USES THEREOF
NUMBER OF SEQUENCES: 103
CORRESPONDENCE ADDRESS:
ADDRESSEE: Sheridan Ross P.C.
STREET: 1700 Lincoln Street, Suite 3500
CITY: Denver
STATE: Colorado
COUNTRY: USA
ZIP: 80203
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patent Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/09/004,731
FILING DATE:
CLASSIFICATION:
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US/08/749,699
FILING DATE:
ATTORNEY/AGENT INFORMATION:
NAME: Connell, Gary J.
REGISTRATION NUMBER: 32,020
REFERENCE/DOCKET NUMBER: 2618-25-C3
TELECOMMUNICATION INFORMATION:
TELEPHONE: (303) 863-9700
TELEFAX: (303) 863-0223
INFORMATION FOR SEQ ID NO: 33:
SEQUENCE CHARACTERISTICS:
LENGTH: 400 amino acids
TYPE: amino acid
TOPOLOGY: linear
MOLECULE TYPE: protein
US-09-004-731-33

Query Match

18.7%; Score 435; DB 3; Length 400;

Best Local Similarity 32.0%; Pred. No. 2.9e-29;

Matches 108; Conservative 45; Mismatches 135; Indels 50; Gaps 10;

QY 80 CRSGWGRFCQREVSFLNCSLDNGCCTHYCLEFVGWRGSCAPGYKLDGDLQCHPAVKE 139
DB 94 CRYGGRFEGGLSIS---CVLGGKPLDLCSSGMTW---SCVDRDIRPEQHGALQNA 147
QY 140 PCGRPWKMKRSHLKRDEDOEDVDPRLLIDGKTRGDSFQGVLLDS---KKKLAC 196
DB 148 TCGELYTRSN-----RIYGHSTGFSGSHWQALIKSGFLSKLSC 188
QY 197 GAVLIHPSWYLTAACM--DESKLLVRLGEYDLR---RMEKWEIJDITKEVPHNYS 250
DB 169 GGAIVSDRWVITPAACVATTPNSNLKVLGEWDVYDHDRLNHEEVAIRKE--VHPSYS 246
QY 251 KSTINDIALHLAQPATLSQTIYPICLPDSGLARELNOAGQETLVGMGSHSREKEA 310
DB 247 PTDPRNVVALVKDRVTFKQHLLPVCLP-----HKQMKLAGKMAIVAGMG---RRHG 297
QY 311 KRNRTFVNLFIKIPVVPNECESEV-----SNWSENNLCAGLIGRDADCEGDSGAPW 365
DB 298 QSTVPAYLQEVVVEVYIPNERQGRFRAAGRRETHIDVFLGAYKEGGSDSCGSGPLI 357
QY 366 ASFGTWFLVGVSMGEGGLLHNYGYTKVSRYLDMT 403
DB 358 MQIEGRRTLVGLVSMGIGGGRHDPGVYINIQKFLPMI 395

RESULT 110

US-08-749-699-30
Sequence 30, Application US/08749699
Patent No. 6210920
GENERAL INFORMATION:
APPLICANT: Wu Hunter, Shirley
APPLICANT: Stiegler, Gary
APPLICANT: Gaines, Patrick J.
TITLE OF INVENTION: FLEA PROTEASE PROTEINS, NUCLEIC ACID
TITLE OF INVENTION: MOLECULES AND USES THEREOF
NUMBER OF SEQUENCES: 103
CORRESPONDENCE ADDRESS:
ADDRESSEE: Sheridan Ross P.C.
STREET: 1700 Lincoln Street, Suite 3500
CITY: Denver
STATE: Colorado
COUNTRY: USA
ZIP: 80203
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patent Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/749,699
FILING DATE:
CLASSIFICATION: 424
ATTORNEY/AGENT INFORMATION:
NAME: Connell, Gary J.
REGISTRATION NUMBER: 32,020
REFERENCE/DOCKET NUMBER: 2618-25-C3
TELECOMMUNICATION INFORMATION:
TELEPHONE: (303) 863-9700
TELEFAX: (303) 863-0223
INFORMATION FOR SEQ ID NO: 30:
SEQUENCE CHARACTERISTICS:
LENGTH: 400 amino acids
TYPE: amino acid
TOPOLOGY: linear
MOLECULE TYPE: protein
US-08-749-699-30

Query Match

18.7%; Score 435; DB 3; Length 400;

Best Local Similarity 32.0%; Pred. No. 2.9e-29;

Matches 108; Conservative 45; Mismatches 135; Indels 50; Gaps 10;

QY 80 CRSGWGRFCQREVSFLNCSLDNGCCTHYCLEFVGWRGSCAPGYKLDGDLQCHPAVKE 139
DB 94 CRYGGRFEGGLSIS---CVLGGKPLDLCSSGMTW---SCVDRDIRPEQHGALQNA 147
QY 140 PCGRPWKMKRSHLKRDEDOEDVDPRLLIDGKTRGDSFQGVLLDS---KKKLAC 196
DB 148 TCGELYTRSN-----RIYGHSTGFSGSHWQALIKSGFLSKLSC 188
QY 197 GAVLIHPSWYLTAACM--DESKLLVRLGEYDLR---RMEKWEIJDITKEVPHNYS 250
DB 169 GGAIVSDRWVITPAACVATTPNSNLKVLGEWDVYDHDRLNHEEVAIRKE--VHPSYS 246
QY 251 KSTINDIALHLAQPATLSQTIYPICLPDSGLARELNOAGQETLVGMGSHSREKEA 310
DB 247 PTDPRNVVALVKDRVTFKQHLLPVCLP-----HKQMKLAGKMAIVAGMG---RRHG 297
QY 311 KRNRTFVNLFIKIPVVPNECESEV-----SNWSENNLCAGLIGRDADCEGDSGAPW 365
DB 298 QSTVPAYLQEVVVEVYIPNERQGRFRAAGRRETHIDVFLGAYKEGGSDSCGSGPLI 357
QY 366 ASFGTWFLVGVSMGEGGLLHNYGYTKVSRYLDMT 403
DB 358 MQIEGRRTLVGLVSMGIGGGRHDPGVYINIQKFLPMI 395

RESULT 111

US-08-749-699-33
Sequence 33, Application US/08749699
Patent No. 6210920
GENERAL INFORMATION:
APPLICANT: Wu Hunter, Shirley
APPLICANT: Stiegler, Gary
APPLICANT: Gaines, Patrick J.
TITLE OF INVENTION: FLEA PROTEASE PROTEINS, NUCLEIC ACID
TITLE OF INVENTION: MOLECULES AND USES THEREOF
NUMBER OF SEQUENCES: 103
CORRESPONDENCE ADDRESS:
ADDRESSEE: Sheridan Ross P.C.
STREET: 1700 Lincoln Street, Suite 3500
CITY: Denver
STATE: Colorado
COUNTRY: USA
ZIP: 80203
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patent Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/749, 699
FILING DATE:
CLASSIFICATION: 424
ATTORNEY/AGENT INFORMATION:
NAME: Connell, Gary J.
REGISTRATION NUMBER: 32,020
REFERENCE/DOCKET NUMBER: 2618-25-C3
TELECOMMUNICATION INFORMATION:
TELEPHONE: (303) 863-9700
TELEFAX: (303) 863-0223
INFORMATION FOR SEQ ID NO: 33:
SEQUENCE CHARACTERISTICS:
LENGTH: 400 amino acids
TYPE: amino acid
TOPOLOGY: linear
MOLECULE TYPE: protein
US-08-749-699-33

Query Match 18.7%; Score 435; DB 3; Length 400;
Best Local Similarity 32.0%; Pred. No. 2.9e-29;
Matches 108; Conservative 45; Mismatches 135; Indels 50; Gaps 10;

QY 80 CDSGMEGRFCQREVSFLNCSLDNGGCTHYGLEVGRRCGAPGYKLGDDLLQCHPAVKF 139
DB 94 CRYGGRFEGGLSIS--CVLGGGKPLDLSGGMTW--SCVDRDIRPPOHQAQNA 147
QY 140 PCGRPMKMEKKSRLKRTDEQDQVDPRLIDGKNTRGDSPMQVVLDS--KKQLAC 196
DB 148 TGGELYTRSN-----RIVGSHSTGSGHPQAALIKSGFLSKLSC 188
QY 197 GAVLIHPSWVLTAACHM--DESKLIVLGEYDLR---RMEKELDDLDKEVFHPNYS 250
DB 189 GSAIVSDRWVLTAAHCVAATPNSNLKVLGEVDVDRHDERLNHEVAIERKE--VHSYS 246
QY 251 KSTINDIALHLAQAATLSQTIPICLPDSGLARELNQAGEITLVGMGHSREKEA 310
DB 247 PTFDRNDVALKLDRIYVTFKQHLFVCLP-----HKQMLAKKATVAAGG---RTHG 297
QY 311 KNRRTFVLNFIKIPVVEHNECSEVW-----SNVSSNNLCAGILGRDADCEDSGGPMV 365
DB 298 GSTVPAVLGEVDVVEIPIENRCQRMFRAGRRETIHDVFLCAGYEGGRSDCCGDSGGPLI 357
QY 366 ASFHGTWFLVGLVSWGEGGGLAHNTGYTKSRYLMI 403
DB 358 MQIEGRRTLVGLVSMGIGGGRHLPGVYTNIQKFIPI 395

RESULT 112
US-09-004-729-30

Sequence 30, Application US/09004729

Patent No. 6406900
GENERAL INFORMATION:
APPLICANT: Wu Hunter, Shirley
APPLICANT: Stiegler, Gary
APPLICANT: Gaines, Patrick J.
TITLE OF INVENTION: FLEA PROTEASE PROTEINS, NUCLEIC ACID
TITLE OF INVENTION: MOLECULES AND USES THEREOF
NUMBER OF SEQUENCES: 103
CORRESPONDENCE ADDRESS:
ADDRESSEE: Sheridan Ross P.C.
STREET: 1700 Lincoln Street, Suite 3500
CITY: Denver
STATE: Colorado
COUNTRY: USA
ZIP: 80203
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patent Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/09/004, 729
FILING DATE:
CLASSIFICATION: 424
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US/08/749, 699
FILING DATE:
ATTORNEY/AGENT INFORMATION:
NAME: Connell, Gary J.
REGISTRATION NUMBER: 32,020
REFERENCE/DOCKET NUMBER: 2618-25-C3
TELECOMMUNICATION INFORMATION:
TELEPHONE: (303) 863-9700
TELEFAX: (303) 863-0223
INFORMATION FOR SEQ ID NO: 30:
SEQUENCE CHARACTERISTICS:
LENGTH: 400 amino acids
TYPE: amino acid
TOPOLOGY: linear
MOLECULE TYPE: protein
US-09-004-729-30

Query Match 18.7%; Score 435; DB 4; Length 400;
Best Local Similarity 32.0%; Pred. No. 2.9e-29;
Matches 108; Conservative 45; Mismatches 135; Indels 50; Gaps 10;

QY 80 CDSGMEGRFCQREVSFLNCSLDNGGCTHYGLEVGRRCGAPGYKLGDDLLQCHPAVKF 139
DB 94 CRYGGRFEGGLSIS--CVLGGGKPLDLSGGMTW--SCVDRDIRPPOHQAQNA 147
QY 140 PCGRPMKMEKKSRLKRTDEQDQVDPRLIDGKNTRGDSPMQVVLDS--KKQLAC 196
DB 148 TGGELYTRSN-----RIVGSHSTGSGHPQAALIKSGFLSKLSC 188
QY 197 GAVLIHPSWVLTAACHM--DESKLIVLGEYDLR---RMEKELDDLDKEVFHPNYS 250
DB 189 GSAIVSDRWVLTAAHCVAATPNSNLKVLGEVDVDRHDERLNHEVAIERKE--VHSYS 246
QY 251 KSTINDIALHLAQAATLSQTIPICLPDSGLARELNQAGEITLVGMGHSREKEA 310
DB 247 PTFDRNDVALKLDRIYVTFKQHLFVCLP-----HKQMLAKKATVAAGG---RTHG 297
QY 311 KNRRTFVLNFIKIPVVEHNECSEVW-----SNVSSNNLCAGILGRDADCEDSGGPMV 365
DB 298 GSTVPAVLGEVDVVEIPIENRCQRMFRAGRRETIHDVFLCAGYEGGRSDCCGDSGGPLI 357
QY 366 ASFHGTWFLVGLVSWGEGGGLAHNTGYTKSRYLMI 403
DB 358 MQIEGRRTLVGLVSMGIGGGRHLPGVYTNIQKFIPI 395

RESULT 113

US-09-004-729-33

Sequence 33, Application US/09004729
Patent No. 6406900
GENERAL INFORMATION:
APPLICANT: W. Hunter, Shirley
APPLICANT: Stiegler, Gary
APPLICANT: Gaines, Patrick J.
TITLE OF INVENTION: FLEA PROTEASE PROTEINS, NUCLEIC ACID
TITLE OF INVENTION: MOLECULES AND USES THEREOF
NUMBER OF SEQUENCES: 103
CORRESPONDENCE ADDRESS:
ADDRESSEE: Sheridan Ross P.C.
STREET: 1700 Lincoln Street, Suite 3500
CITY: Denver
STATE: Colorado
COUNTRY: USA
ZIP: 80203
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patent Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/09/004,729
FILING DATE:
CLASSIFICATION: 424
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US/08/749,699
FILING DATE:
ATTORNEY/AGENT INFORMATION:
NAME: Connell, Gary J.
REGISTRATION NUMBER: 32,020
REFERENCE/DOCKET NUMBER: 2618-25-C3
TELECOMMUNICATION INFORMATION:
TELEPHONE: (303) 863-9700
TELEFAX: (303) 863-0223
INFORMATION FOR SEQ ID NO: 33:
SEQUENCE CHARACTERISTICS:
LENGTH: 400 amino acids
TYPE: amino acid
TOPOLOGY: linear
MOLECULE TYPE: protein
US-09-004-729-33

Query Match 18.7%; Score 435; DB 4; Length 400;
Best Local Similarity 32.0%; Pred. No. 2,9e-29;
Matches 108; Conservative 45; Mismatches 135; Indels 50; Gaps 10;

QY 80 CRSWEGRFQREVSFLNCSLDNGGCTHYCLEEVGWRRCSCAGYKGLDILLQCHPAVKE 139
DB 94 CRYGGRFEGCLGIS---CYLGGKPLDLCGGMTW---SCVDRDIRPEHQGALQNA 147
QY 140 PCGRPWMEKKRSHLKRDEDEQDVDPRLIDGKTRRQDSFWQVVLDS---KKKLAC 196
DB 148 TCGELYTRSN-----RIVGHSFGSHWQALIKSGFLSKLSC 188
QY 197 GAVLIHPSWVLTAFACM--DESKKLVLRLGEYDLR---RMEKWEJLDIDKEVFNHNS 250
DB 189 GGLVSDRWVITPAICVATTNSLKYRLGEMDVDRDDEKLNHEEVALERKE--VHSYS 246
QY 251 KSTTDNDIALHLAQPATLSQTVIPLCLPDSGLARBLNAGQETILVTMGVHSSREKA 310
DB 247 PTDPRNDVALVKLRDTVIFKQHLIPVCLP-----HKQKLAGKMATVAGWG---RTIRG 297
QY 311 KKRRTVLANFIKIPVPHNCESEVW-----SNMVSNNLCAGLIGRDACGDSGGPVN 365
DB 298 QSTVPALQGVDEVDVETVFNRCQRFRAARRETHIDVFLCAGYEGGRDSCGDSGGELT 357
QY 366 ASFHGTWFLVGLVSWGEGCLLHNYGYTVYSKYLDT 403
DB 358 MQIEGRRTLVGLVSWGIGGGRHLPGVTINIQKFLPMI 395

RESULT 114

US-09-032-215-8

Sequence 8, Application US/09032215
Patent No. 6204010
GENERAL INFORMATION:
APPLICANT: Stiegler, Gary J.
APPLICANT: Gaines, Patrick J.
TITLE OF INVENTION: FLEA PROTEASE PROTEINS, NUCLEIC
TITLE OF INVENTION: ACID MOLECULES, AND USES THEREOF
NUMBER OF SEQUENCES: 50
CORRESPONDENCE ADDRESS:
ADDRESSEE: Sheridan Ross P.C.
STREET: 1700 Lincoln Street, Suite 3500
CITY: Denver
STATE: Colorado
COUNTRY: U.S.A.
ZIP: 80203
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: ASCII DOS TEXT
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/09/032,215
FILING DATE: 27-FEB-1998
CLASSIFICATION: 536
PRIOR APPLICATION DATA:
APPLICATION NUMBER:
FILING DATE:
ATTORNEY/AGENT INFORMATION:
NAME: Connell, Gary J.
REGISTRATION NUMBER: 32,020
REFERENCE/DOCKET NUMBER: 2618-25-C6
TELECOMMUNICATION INFORMATION:
TELEPHONE: (303) 863-9700
TELEFAX: (303) 863-0223
INFORMATION FOR SEQ ID NO: 8:
SEQUENCE CHARACTERISTICS:
LENGTH: 387 amino acids
TYPE: amino acid
TOPOLOGY: linear
MOLECULE TYPE: Protein
US-09-032-215-8

Query Match 18.6%; Score 432; DB 3; Length 387;
Best Local Similarity 32.0%; Pred. No. 5e-29;
Matches 108; Conservative 44; Mismatches 136; Indels 50; Gaps 10;

QY 80 CRSWEGRFQREVSFLNCSLDNGGCTHYCLEEVGWRRCSCAGYKGLDILLQCHPAVKE 139
DB 81 CRYGGRFEGCLGIS---CYLGGKPLDLCGGMTW---SCVDRDIRPEHQGALQNA 134
QY 140 PCGRPWMEKKRSHLKRDEDEQDVDPRLIDGKTRRQDSFWQVVLDS---KKKLAC 196
DB 135 TCGELYTRSN-----RIVGHSFGSHWQALIKSGFLSKLSC 175
QY 197 GAVLIHPSWVLTAFACM--DESKKLVLRLGEYDLR---RMEKWEJLDIDKEVFNHNS 250
DB 176 GGLVSDRWVITPAICVATTNSLKYRLGEMDVDRDDEKLNHEEVALERKE--VHSYS 233
QY 251 KSTTDNDIALHLAQPATLSQTVIPLCLPDSGLARBLNAGQETILVTMGVHSSREKA 310
DB 234 PTDPRNDVALVKLRDTVIFKQHLIPVCLP-----HKQKLAGKMATVAGWG---RTIRG 284
QY 311 KKRRTVLANFIKIPVPHNCESEVW-----SNMVSNNLCAGLIGRDACGDSGGPVN 365
DB 285 QSTVPALQGVDEVDVETVFNRCQRFRAARRETHIDVFLCAGYEGGRDSCGDSGGELT 344
QY 366 ASFHGTWFLVGLVSWGEGCLLHNYGYTVYSKYLDT 403
DB 345 MQIEGRRTLVGLVSWGIGGGRHLPGVTINIQKFLPMI 382

RESULT 115

US-09-032-215-13
Sequence 13, Application US/09032215
Patent No. 6204010
GENERAL INFORMATION:
APPLICANT: Stiegler, Gary L.
APPLICANT: Gaines, Patrick J.
TITLE OF INVENTION: FLEA PROTEASE PROTEINS, NUCLEIC
ACID MOLECULES, AND USES THEREOF
NUMBER OF SEQUENCES: 50
CORRESPONDENCE ADDRESS:
ADDRESSEE: Sheridan Ross P.C.
STREET: 1700 Lincoln Street, Suite 3500
CITY: Denver
STATE: Colorado
COUNTRY: U.S.A.
ZIP: 80203
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: ASCII DOS TEXT
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/09/032,215
FILING DATE: 27-FEB-1998
CLASSIFICATION: 536
PRIOR APPLICATION DATA:
APPLICATION NUMBER:
FILING DATE:
ATTORNEY/AGENT INFORMATION:
NAME: Connell, Gary J.
REGISTRATION NUMBER: 32,020
REFERENCE/DOCKET NUMBER: 2618-25-C6
TELECOMMUNICATION INFORMATION:
TELEPHONE: (303) 863-9700
TELEFAX: (303) 863-0223
INFORMATION FOR SEQ ID NO: 13:
SEQUENCE CHARACTERISTICS:
LENGTH: 387 amino acids
TYPE: amino acid
TOPOLOGY: linear
MOLECULE TYPE: Protein
US-09-032-215-13

Query Match 18.6%; Score 432; DB 3; Length 387;

Best Local Similarity 32.08; Pred. No. 5e-29; Indels 50; Gaps 10;

Matches 108; Conservative 44; Mismatches 136; Indels 50; Gaps 10;

QY 80 CRSWGEKFCQREVSLFNSLDNGGCTHYCLIEVGNRRCSAPGYKLGDDLQCHPAVKF 139
DB 81 CRYKGERFECGLIS---CYIGGKPLDLSGGWIV---SCVDRDIRPEPQHGALQNA 134
QY 140 PCGRPWKMEKRSKSHLKRDEDEQVDPRILDGKTRRGDSFWQVYLLS---KKKLAAC 196
DB 135 TCCEGLYTRSN-----RIVGSHSTGSGHPWQALIKSGLSKLSJC 175
QY 197 GATLHPBSWVLTAAHQM--DESKLLVLRGVDLR---RMEKWELEDLKEVFAVNTS 250
DB 176 GGLVSDRWVLTAAHCVATPNSKNLKVLSGWVDRDRLNHEEYALAEKE--VHPSIS 233
QY 251 KSTTDIALALHLAQAATLSQTVPLCLPDSGLAERELNQAQETFLVWGHSSEKEA 310
DB 234 PTOFRNDVALVLRATVIFKQHLIPVCLP-----HKQVKLAGKATVAGWG---RTRHG 284
QY 311 KRKRFTVNFYKIPVPHNCSFW-----SNMSENMCAGLIDRDDACEGSGGPV 365
DB 285 QSTVPAVLQEVVETVFNERQCFWPAAGRETTIHDFLCAGKEGSDSCQSGSGLPT 344
QY 366 ASFHGTWFLVGLVSGGCGGLLHNYGVYTKVSRYLADI 403
DB 345 MLEBGRRTLVGLVSGIGCGREHLPGVTINIKRKIPWI 382

RESULT 116

US-08-944-483-48
Sequence 48, Application US/08944483
Patent No. 6232456
GENERAL INFORMATION:
APPLICANT: COHEN, MAURICE
APPLICANT: COLPITTS, TRACEY L.
APPLICANT: FRIEDMAN, PAULA N.
APPLICANT: GRANADOS, EDWARD N.
APPLICANT: KLAAS, MICHAEL R.
APPLICANT: RUSSELL, JOHN C.
APPLICANT: STEWART, KENT D.
APPLICANT: STROUPE, STEVEN D.
TITLE OF INVENTION: NOVEL SERINE PROTEASE REAGENTS
AND METHODS USEFUL FOR DETECTING AND TREATING DISEASES
TITLE OF INVENTION: OF THE PROSTATE
NUMBER OF SEQUENCES: 76
CORRESPONDENCE ADDRESS:
ADDRESSEE: Abbott Laboratories
STREET: 100 Abbott Park Road
CITY: Abbott Park
STATE: IL
COUNTRY: USA
ZIP: 60064-3500
COMPUTER READABLE FORM:
MEDIUM TYPE: Diskette
COMPUTER: IBM Compatible
OPERATING SYSTEM: DOS
SOFTWARE: FastSeq for Windows Version 2.0
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/944,483
FILING DATE:
CLASSIFICATION: 424
PRIOR APPLICATION DATA:
APPLICATION NUMBER:
FILING DATE:
ATTORNEY/AGENT INFORMATION:
NAME: Becker, Cheryl L.
REGISTRATION NUMBER: 35,441
REFERENCE/DOCKET NUMBER: 6183.US.01
TELECOMMUNICATION INFORMATION:
TELEPHONE: 847/935-1729
TELEFAX: 847/938-2623
TELEX:
INFORMATION FOR SEQ ID NO: 48:
SEQUENCE CHARACTERISTICS:
LENGTH: 235 amino acids
TYPE: amino acid
STRANDEDNESS: single
TOPOLOGY: linear
MOLECULE TYPE: No. 6232456e
US-08-944-483-48

Query Match 18.5%; Score 429; DB 3; Length 235;

Best Local Similarity 35.73; Pred. No. 4.9e-29; Indels 14; Gaps 5;

Matches 85; Conservative 44; Mismatches 95; Indels 14; Gaps 5;

QY 170 LIDKMTBRGDSFWQVYLLDSKKKLAQAVLHPBSWVLTAAHQMDESKLLVLRGEVDLR 229
DB 1 VVGEGLAKQGGPPWQV--LNGKVDAFCGGSIVNEKMTVLTAAHCVETGATVVAEGRNIE 59
QY 230 RMEKWELEDLKEVFAVNTS---DNDIALALHQAATLSQTVPLCLPDSGLAERE 287
DB 60 ETEHTEKRVIRIIPHNHYAALNKYNDIALHLDEPLVLSYTPICIDKEYNINIF 119
QY 288 LINGAGETLVWG--YHSSREKAVRNTFYANFKIPVPHNCSFWNSNMSENMCA 345
DB 120 LKFG--SGYISGKRVHKGSS-----ALVLQYLRVLRATVIFKQHLIPVCLP 170
QY 346 AGILGRDQACGSDSGGPMVASFHGTWFLVGLVSGGCGGLLHNYGVYTKVSRYLADI 403
DB 171 AGFHGGRDSCGSDSGGPMVASFHGTWFLVGLVSGGCGGLLHNYGVYTKVSRYLADI 228

RESULT 117
US-09-004-731-36
; Sequence 36, Application US/09004731
; Patent No. 6177258
; GENERAL INFORMATION:
; APPLICANT: Wu Hunter, Shirley
; APPLICANT: Stiegler, Gary
; APPLICANT: Gaines, Patrick J.
; TITLE OF INVENTION: FLEA PROTEASE PROTEINS, NUCLEIC ACID
; TITLE OF INVENTION: MOLECULES AND USES THEREOF
; NUMBER OF SEQUENCES: 103
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Sheridan Ross P.C.
; STREET: 1700 Lincoln Street, Suite 3500
; CITY: Denver
; STATE: Colorado
; COUNTRY: USA
; ZIP: 80203
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: PatentIn Release #1.0, Version #1.30
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/09/004,731
; FILING DATE:
; CLASSIFICATION:
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US/08/749,699
; FILING DATE:
; ATTORNEY/AGENT INFORMATION:
; NAME: Connell, Gary J.
; REGISTRATION NUMBER: 32,020
; REFERENCE/DOCKET NUMBER: 2618-25-C3
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: (303) 863-9700
; TELEFAX: (303) 863-0223
; INFORMATION FOR SEQ ID NO: 36:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 242 amino acids
; TYPE: amino acid
; TOPOLOGY: linear
; MOLECULE TYPE: protein
; US-09-004-731-36

Query Match 18.4%; Score 428.5; DB 3; Length 242;
Best Local Similarity 37.1%; Pred. No. 5,6e-29;
Matches 92; Conservative 40; Mismatches 91; Indels 25; Gaps 7;

QY 170 LIDGKMTREGDSFQWVLLDS---KKKLAGAVLIHPSWVLTAAHQM--DESKILVRLG 224
DB 1 IVGCHSTGFSPHQAALIKSGFLSKKCGGALVSDRWITAAHCVATTNSNLYKRLG 60
QY 225 EYDUR---RMEKWEIDDIYEVVHFNYSKSTTNDIALHLAQPATLSQTIYPICLPD 280
DB 61 EMDVYRDHDERLHNEEYALERE--VHPSYSPDFRNDVALVKDRVITKQHLIPCLP 117
QY 281 SGLARELNAQGETLYTNGGYHSSREKAKRRTFVNLFIKIPVYPHNECEVM----- 335
DB 118 ---HKQKLAGCAIVAGWG---RTRHQSTVPAVLQEVDEVEVFNRCQRFRAAGR 169
QY 336 SNMVSNNMLCAGILGRDACEGSDGSPVYASFHGTWFLVGLVSWGCGGLAHNYGYTK 395
DB 170 RETIHDFVLCAGYKBEGRDSCGDSGGLIMQIBGRITLVGLVSWGIGGRHLPGVYTN 229
QY 396 VSRYLDMT 403
DB 230 IQKFLPMI 237

RESULT 118
US-08-749-699-36

; Sequence 36, Application US/08749699
; Patent No. 6210920
; GENERAL INFORMATION:
; APPLICANT: Wu Hunter, Shirley
; APPLICANT: Stiegler, Gary
; APPLICANT: Gaines, Patrick J.
; TITLE OF INVENTION: FLEA PROTEASE PROTEINS, NUCLEIC ACID
; TITLE OF INVENTION: MOLECULES AND USES THEREOF
; NUMBER OF SEQUENCES: 103
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Sheridan Ross P.C.
; STREET: 1700 Lincoln Street, Suite 3500
; CITY: Denver
; STATE: Colorado
; COUNTRY: USA
; ZIP: 80203
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: PatentIn Release #1.0, Version #1.30
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/749,699
; FILING DATE:
; CLASSIFICATION: 424
; ATTORNEY/AGENT INFORMATION:
; NAME: Connell, Gary J.
; REGISTRATION NUMBER: 32,020
; REFERENCE/DOCKET NUMBER: 2618-25-C3
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: (303) 863-9700
; TELEFAX: (303) 863-0223
; INFORMATION FOR SEQ ID NO: 36:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 242 amino acids
; TYPE: amino acid
; TOPOLOGY: linear
; MOLECULE TYPE: protein
; US-08-749-699-36

Query Match 18.4%; Score 428.5; DB 3; Length 242;
Best Local Similarity 37.1%; Pred. No. 5,6e-29;
Matches 92; Conservative 40; Mismatches 91; Indels 25; Gaps 7;

QY 170 LIDGKMTREGDSFQWVLLDS---KKKLAGAVLIHPSWVLTAAHQM--DESKILVRLG 224
DB 1 IVGCHSTGFSPHQAALIKSGFLSKKCGGALVSDRWITAAHCVATTNSNLYKRLG 60
QY 225 EYDUR---RMEKWEIDDIYEVVHFNYSKSTTNDIALHLAQPATLSQTIYPICLPD 280
DB 61 EMDVYRDHDERLHNEEYALERE--VHPSYSPDFRNDVALVKDRVITKQHLIPCLP 117
QY 281 SGLARELNAQGETLYTNGGYHSSREKAKRRTFVNLFIKIPVYPHNECEVM----- 335
DB 118 ---HKQKLAGCAIVAGWG---RTRHQSTVPAVLQEVDEVEVFNRCQRFRAAGR 169
QY 336 SNMVSNNMLCAGILGRDACEGSDGSPVYASFHGTWFLVGLVSWGCGGLAHNYGYTK 395
DB 170 RETIHDFVLCAGYKBEGRDSCGDSGGLIMQIBGRITLVGLVSWGIGGRHLPGVYTN 229
QY 396 VSRYLDMT 403
DB 230 IQKFLPMI 237

RESULT 119
US-09-004-729-36
; Sequence 36, Application US/09004729
; Patent No. 6406900
; GENERAL INFORMATION:
; APPLICANT: Wu Hunter, Shirley
; APPLICANT: Stiegler, Gary
; APPLICANT: Gaines, Patrick J.

TITLE OF INVENTION: FLEA PROTEASE PROTEINS, NUCLEIC ACID
STREET: 1001 G Street, N.W.
CITY: Washington, D.C.
STATE: Washington, D.C.
COUNTRY: USA
ZIP: 20001
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Word Perfect 5.1
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/750,711
FILING DATE: June 14, 1995
FILING DATE: June 17, 1994
ATTORNEY/AGENT INFORMATION:
NAME: Hoschelt, Dale H.
REGISTRATION/DOCKET NUMBER: 10180, 01675
TELEPHONE: 202-508-9100
TELEFAX: 202-508-9200
INFORMATION FOR SEQ ID NO: 1:
SEQUENCE CHARACTERISTICS:
LENGTH: 814 amino acids
TYPE: amino acid
TOPOLOGY: linear
MOLECULE TYPE: protein
US-09-004-729-36

Query Match 18.4%; Score 428.5; DB 4; Length 242;
Best Local Similarity 37.1%; Pred. No. 5,6-29;
Matches 92; Conservative 40; Mismatches 91; Indels 25; Gaps 7;

QY 170 LIDGKMTREDSFWQVLLDS---KKKLAAGAVLHPSMVLTAHCK--DESKLLAVLG 224
DB 1 IVGHSTGFGSHWQALIKSGFLSKKLSCGALVSDRWVITAAHCATTPSNKAYLG 60
QY 225 EYDRA---KREKMDLDIKFVPHNYSKSTINDIALHLAOPATLSQITVPICLPD 280
DB 61 EMDVHDHDERLHNEHVALERKE--VHPSYSPPTDFRDVALVLDRTVITFKHILFVCLP- 117
QY 281 SGIAERLNAQDETLVTMGYHSSREKAKRRTFVNLFIKIEVPHNECSBYM----- 335
DB 118 ---HKQKLAGKMAVYAGMG---RTRHGQSTVPAVLQEDVDEVIENECQGRFRAGR 169
QY 336 SNNVSENNLCAGILGDRDACEGSGGPMVASFHGTWFLVGLVSKGSGCLLHNYGYTK 395
DB 170 RETIDVFLCAGYKEGGSDSCQSGGFLIMQIEGRRTLVGLVSMGICGRREHLGVYTN 229
QY 396 VASVYLDWI 403
DB 230 IQKFTPMI 237

RESULT 120
US-08-750-711-1
Sequence 1, Application US/08750711
GENERAL INFORMATION:
APPLICANT: Dawson, Keith M
APPLICANT: Wood, Lars M
APPLICANT: Comer, Michael B
TITLE OF INVENTION: THROMBOLYTIC COMPOSITION
NUMBER OF SEQUENCES: 1
CORRESPONDENCE ADDRESS:

ADDRESSEE: Banner & Allegretti, Ltd.
STREET: 1001 G Street, N.W.
CITY: Washington, D.C.
STATE: Washington, D.C.
COUNTRY: USA
ZIP: 20001
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Word Perfect 5.1
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/750,711
FILING DATE: March 18, 1997
CLASSIFICATION: 514
PRIOR APPLICATION DATA:
APPLICATION NUMBER: PCT/GB95/01388
FILING DATE: June 14, 1995
FILING DATE: June 17, 1994
ATTORNEY/AGENT INFORMATION:
NAME: Hoschelt, Dale H.
REGISTRATION/DOCKET NUMBER: 10180, 01675
TELEPHONE: 202-508-9100
TELEFAX: 202-508-9200
INFORMATION FOR SEQ ID NO: 1:
SEQUENCE CHARACTERISTICS:
LENGTH: 814 amino acids
TYPE: amino acid
TOPOLOGY: linear
MOLECULE TYPE: protein
US-08-750-711-1

Query Match 18.1%; Score 421; DB 1; Length 814;
Best Local Similarity 32.6%; Pred. No. 1,1e-27;
Matches 111; Conservative 49; Mismatches 119; Indels 62; Gaps 14;

QY 81 RSGMEGRFCQREVSFLNCSLNDGCTHYCLEYGMWRCSGAPGYLAD--DLQCHPAVK 138
DB 523 RAGLEKNYCR-----NPDGDIVG-----FM--CCTTKRKLXYGCVDPQC--AAPS 564
QY 139 FCGRPMKREMKRSHILKRDTEQDQVDPLIDKMTTRSGSPWQVLLDSKKKLACGA 198
DB 565 FDCGKP--QVBPCKCTTK-----IKPRIVGCVAPHPHSPWQVSLTRGMEFCSG 613
QY 199 VLHPSMTVTAHMDSESK--LIVRLGEYDLRMEKMDLDIKFVPHNYSKSTTD 255
DB 614 TLISPEWVLTAHCLKSPSPSSKYVILGALQKVNLEPHVQIEVSRFLFEP-----TR 667
QY 256 NDIALHLAOPATLSQITVPICLPDSG--IAERLNAQDETLVTMGYHSSREKAKRN 313
DB 668 KDIILAKLSSPAVITLDVPIACLPSPNVVADR-----TECFITGMG-----ETQ 712
QY 314 RTVNLNFIK--IPVPHNECS--EYMSNNVSENNLCAGILGDRDACEGSGGPMVASF 368
DB 713 GTFGAGLKEAQLPYITNKVONKRYEFLNGRVQSTELCAGHLAGGSDSCQSGGSLVCE 772
QY 369 HGTWFLVGLVSMGEGCGGLHNYGVYTKVSRVLDIHIHGRD 409
DB 773 KDKIILQGVTSWGLGCAFPKPKGVYTVRYVRSRYTVIIEBGMN 813

RESULT 121
US-08-944-483-63
Sequence 63, Application US/08944483
GENERAL INFORMATION:
APPLICANT: COHEN, MAURICE
APPLICANT: COLPITTS, TRACEY L.
APPLICANT: FRIEDMAN, PAULA N.
APPLICANT: GRANADOS, EDWARD N.


```

GENERAL INFORMATION:
APPLICANT: Au-Young, Janice
APPLICANT: Bandman, Olga
APPLICANT: Braxton, Scott Michael
APPLICANT: Goli, Surya
TITLE OF INVENTION: A NOVEL HUMAN KALLIKREIN
NUMBER OF SEQUENCES: 4
CORRESPONDENCE ADDRESS:
ADDRESSEE: INCYTE PHARMACEUTICALS, INC.
STREET: 3174 Porter Drive
CITY: Palo Alto
STATE: CA
COUNTRY: US
ZIP: 94304
COMPUTER READABLE FORM:
MEDIUM TYPE: Diskette
COMPUTER: IBM Compatible
OPERATING SYSTEM: DOS
SOFTWARE: FastSeq Version 1.5
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/681,151
FILING DATE: Herewith
CLASSIFICATION: 435
PRIOR APPLICATION DATA:
APPLICATION NUMBER:
FILING DATE:
ATTORNEY/AGENT INFORMATION:
NAME: Billings, Lucy J.
REGISTRATION NUMBER: 36,749
REFERENCE/DOCKET NUMBER: PF-0074US
TELECOMMUNICATION INFORMATION:
TELEPHONE: 415-855-0555
TELEX: 415-845-4166
TELETYPE:
INFORMATION FOR SEQ ID NO.: 3:
SEQUENCE CHARACTERISTICS:
LENGTH: 638 amino acids
TYPE: amino acid
STRANDNESS: single
TOPOLOGY: linear
MOLECULE TYPE: peptide
IMMEDIATE SOURCE:
LIBRARY: GENBANK
CLONE: 205011
DS-08-681-151-3

Query Match      17.8%; Score 414; DB 2; Length 638;
Best Local Similarity 20.3%; Pred.No. 3.2e-27;
Matches 132; Conservative 66; Mismatches 159; Indels 110; Gaps 19

    12 SLRSGCIET-CDEEAKELPQNVDTLAFMSKGVDDQCIVLPRLRHPSALCGSHGTCI 70
       |||::|||::||||::|||::|||::|||::|||::|||::|||::|||::|||::
   190 SLSKCALSISIGDM-----DIFQH---FAVADNVSQ---VFEPDAVCRTCTFHPPNL 238

        71 DGIQSFCDCRSWGEFGCOREYSLNSLDNGCHTGLE--VGMRSCA----- 121
           -----FFTYLTMEWTES-QRVNCELNKS-KSRGPSPIIQENAVSYSLFTCKARPEP 291
               122 -----PGYLGDLLQCPHAVVPCCGPBK:::-PMKKRSHUKR 157
                   CHFYITYSGLVAFGIELNAVTVGGADAOCGTCTKTICOGFTYTSLIPDDCKAGGCACSRL 351
                       292 CHTFYITSGLVAFGIELNAVTVGGADAOCGTCTKTICOGFTYTSLIPDDCKAGGCACSRL 351
                           158 DTE-----DOEDVDPLRIDGMKTRGRDSPVVY--VL 187
                               : :::::::::::::
   352 STDOSPRIRTYDAQSSGSYSLRCLKVESSDCTTKINARIYVGNNSSLGEMPVSVLSVK 411

         188 LDKSKKLACGAVALHPBSWTLTAHAWODESKKLIVRIAGEYDLRRWEKNELD_ 238
             412 IWSQNHR-GEGSIIRQRWLTPAAHCFD-----GIPTDYWKIRYGGLMLSSIINKPKF 463
                 239 -DIKEVAVPNPYNSKSTTDNDIALHLDPATLSQTIVPICPDGSLARELIQAQGSELY 297
                     464 SSTIEELLHQCKRMBSGSYDALIKQLPPLNYTFEQFICDP----SKADTNITIYNKV 515

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QY 298 TNGCHSSREKAKNRTTUNIKIPVPHNECEVMSN-MYSENMCAIGILDRODAC 356
D 520 TGMGY--TKERETN--ILQKXIPVPHNECECKKXRYVITTKOMTCAAYKKGIDAC 574
QY 357 EGDGGPMVASFHGTWFLVGVSWGEGCOLLHNYGYTKYSRIYDHI 403
D 575 KDGSGFLVCKHSGRMQLVGLTWSGECARKEKPGVITTKAETIDMI 621

RESULT 123

US-08-248-629A-1
Sequence 1, Application US/08248629A
Patent No. 5639725
GENERAL INFORMATION:
APPLICANT: Folkman, Judah
APPLICANT: O'Reilly, Michael
TITLE OF INVENTION: Angiostatin and Method of Use
NUMBER OF SEQUENCES: 6
CORRESPONDENCE ADDRESS:
ADDRESSEE: Jones & Askew
STREET: 191 Peachtree Street, 37th Floor
CITY: Atlanta
STATE: Georgia
COUNTRY: USA
ZIP: 30303-1769
COMPUTER READABLE FORM:
MEDIUM TYPE: Diskette, 3.50
COMPUTER: Macintosh
OPERATING SYSTEM: 7.0
SOFTWARE: Microsoft Word
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/248,629A
FILING DATE: 04/26/94
CLASSIFICATION: 514
PRIOR APPLICATION DATA:
APPLICATION NUMBER:
FILING DATE:
ATTORNEY/AGENT INFORMATION:
NAME: Larry W. Sculles, Ph.D.
REGISTRATION NUMBER: 34,025
REFERENCE/DOCKET NUMBER: 05213-0120
TELECOMMUNICATION INFORMATION:
TELEPHONE: 404-818-3700
TELEFAX: 404-818-3799
INFORMATION FOR SEQ ID NO: 1:
SEQUENCE CHARACTERISTICS:
LENGTH: 812
TYPE: amino acid
TOPOLOGY: linear
US-08-248-629A-1

Query Match 17.7%; Score 412; DB 1; Length 812;
Best Local Similarity 32.1%; Pred. No. 6.3e-27;
Matches 108; Conservative 51; Mismatches 91; Indels 86; Gaps 16;

QY 107 HCYLEBVG-----WRGSCAPGYKGD--DLQCHPAVYFPGGPRWMEKKSILKRT 159
D 529 NYCENPDGVDNGPW--CYTTPRKLYDYCDIPICASASSFECKP----- 571
QY 160 EDQEDQVDP-----RLIDGKMTGRGDSFMOYVLLDSKKLA-----CGAVLIHPSWULTPA 210
D 572 -----QVEPKKCPGRVVGCVANPHSWPMQIST--RTRFTQGHCGGTLIAPEWULTPA 623
QY 211 HCMDESKK--LTVLAGEYDLRMEKMLDDIXEVFV-----HNNYSKSTTNDIALIH 262
D 624 HCLEKSRPEEFYKVLGNH-----EYIRGLDVOEISVAKLILEN-----NRDIALIK 672
QY 263 LAQPATISQTVIPICLPDSG--LAEREINQAQETLVYTGNG-----YHSSREKAKNRT 315
D 673 LSRPATITDKVIPACLPSPNMYADRTI-----CYTTGEGTQGTFAAGLKEA----- 721
QY 316 FVNLFIKIPVPHNECS--EWSNMVSENMCAIGILDRODACBGDSGPMVASFHGTWF 373

DB 722 -----QLPIENKVCNVEYLIANNRVSTELCAQGLAGCYVDSQSGGGLPVCCEKDKYI 775
QY 374 LVGLVSWGEGCOLLHNYGYTKYSRIYDHI 409
D 776 LQGVTSWGLCARPNKPGVYVRSFVWTEREMN 811

RESULT 124

US-08-451-932-1
Sequence 1, Application US/08451932
Patent No. 5733876
GENERAL INFORMATION:
APPLICANT: Folkman, Judah
APPLICANT: O'Reilly, Michael
TITLE OF INVENTION: Method of Treating an Angiogenic
NUMBER OF SEQUENCES: 6
CORRESPONDENCE ADDRESS:
ADDRESSEE: Jones & Askew
STREET: 191 Peachtree Street, 37th Floor
CITY: Atlanta
STATE: Georgia
COUNTRY: USA
ZIP: 30303-1769
COMPUTER READABLE FORM:
MEDIUM TYPE: Diskette, 3.50
COMPUTER: Macintosh
OPERATING SYSTEM: 7.0
SOFTWARE: Microsoft Word
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/451,932
FILING DATE: 05/26/95
CLASSIFICATION: 514
PRIOR APPLICATION DATA:
APPLICATION NUMBER: 08/248,629
FILING DATE: 04/26/94
ATTORNEY/AGENT INFORMATION:
NAME: Larry W. Sculles, Ph.D.
REGISTRATION NUMBER: 34,025
REFERENCE/DOCKET NUMBER: 05213-0123
TELECOMMUNICATION INFORMATION:
TELEPHONE: 404-818-3700
TELEFAX: 404-818-3799
INFORMATION FOR SEQ ID NO: 1:
SEQUENCE CHARACTERISTICS:
LENGTH: 812
TYPE: amino acid
TOPOLOGY: linear
US-08-451-932-1

Query Match 17.7%; Score 412; DB 1; Length 812;
Best Local Similarity 32.1%; Pred. No. 6.3e-27;
Matches 108; Conservative 51; Mismatches 91; Indels 86; Gaps 16;

QY 107 HCYLEBVG-----WRGSCAPGYKGD--DLQCHPAVYFPGGPRWMEKKSILKRT 159
D 529 NYCENPDGVDNGPW--CYTTPRKLYDYCDIPICASASSFECKP----- 571
QY 160 EDQEDQVDP-----RLIDGKMTGRGDSFMOYVLLDSKKLA-----CGAVLIHPSWULTPA 210
D 572 -----QVEPKKCPGRVVGCVANPHSWPMQIST--RTRFTQGHCGGTLIAPEWULTPA 623
QY 211 HCMDESKK--LTVLAGEYDLRMEKMLDDIXEVFV-----HNNYSKSTTNDIALIH 262
D 624 HCLEKSRPEEFYKVLGNH-----EYIRGLDVOEISVAKLILEN-----NRDIALIK 672
QY 263 LAQPATISQTVIPICLPDSG--LAEREINQAQETLVYTGNG-----YHSSREKAKNRT 315
D 673 LSRPATITDKVIPACLPSPNMYADRTI-----CYTTGEGTQGTFAAGLKEA----- 721
QY 316 FVNLFIKIPVPHNECS--EWSNMVSENMCAIGILDRODACBGDSGPMVASFHGTWF 373

Db 722 -----QLPVLENKVCNRYEYLNKRYSTELCAGLAGVDSCGDSGSPVCEPKKXI 775

QY 374 LVGLVSWGEGGGLHNYGYTKVSRYLDTWTHGHRD 409

Db 776 LGQVTSWGLGCAFPNKPQYVYVSRFVDMIEREMR 811

RESULT 125
US-08-452-260-1
Sequence 1, Application US/08452260
Patent No. 5776704
GENERAL INFORMATION:
APPLICANT: Folkmann, Judah
APPLICANT: O'Reilly, Michael
TITLE OF INVENTION: Method of Diagnosing an Angiogenic
TITLE OF INVENTION: Disease
NUMBER OF SEQUENCES: 6
CORRESPONDENCE ADDRESS:
ADDRESSEE: Jones & Askew
STREET: 191 Peachtree Street, 37th Floor
CITY: Atlanta
STATE: Georgia
COUNTRY: USA
ZIP: 30303-1769
COMPUTER READABLE FORM:
MEDIUM TYPE: Diskette, 3.50
COMPUTER: Macintosh
OPERATING SYSTEM: 7.0
SOFTWARE: Microsoft Word
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/452,260
FILING DATE: 05/26/95
CLASSIFICATION: 514
PRIOR APPLICATION DATA:
APPLICATION NUMBER: 08/248,629
FILING DATE: 04/26/94
ATTORNEY/AGENT INFORMATION:
NAME: Larry W. Stults, Ph.D.
REGISTRATION NUMBER: 34,025
REFERENCE/DOCKET NUMBER: 05213-0124
TELECOMMUNICATION INFORMATION:
TELEPHONE: 404-818-3700
TELEFAX: 404-818-3799
INFORMATION FOR SEQ. ID NO. 1:
SEQUENCE CHARACTERISTICS:
LENGTH: 812
TYPE: amino acid
TOPOLOGY: linear
US-08-452-260-1

Query Match 17.7%; Score 412; DB 1; Length 812;
Best Local Similarity 32.1%; Pred. No. 6.3e-27;
Matches 108; Conservative 51; Mismatches 91; Indels 86; Gaps 16;

QY 107 HCYCLEVGV-----WRCSCAPGYKGD--DLQCHPAVKPCCGRPMKMKKSHLRDT 159

Db 529 NYCNPNPDGVNGPW--CYTTPRKLTDYCDIPLCASPSFECKP----- 571

QY 160 EDQEDQYDP-----RLIDGKTRRGSPQVAVLDSKKLA-----CGAVLHPSWTLAA 210

Db 572 -----QVEPKCPGVVGGCVANPHSPWQISL--RTRFGQHFQGGTLAPPEWTLAA 623

QY 211 HCMDESKK--LLVNLGEYDLRMEKMELDIDKEVFV-----HPVYSGTDDNDIALH 262

Db 624 HCLKSRPREFYVILGAH-----EYIRGLDVQELISYAKLILEPN-----NRDIALK 672

QY 263 LAQPATLSQTIIVPICLPDSG--LAERLNOAQOETLVTWG-----YHSSREKAKANNRT 315

Db 673 LSRPATITDVIPACIPSPNMYVADRIT-----CYITGWEOTGTFGAGRKEA----- 721

QY 316 FVNLFIKIPVYHNCS--EYMSNMYSENMLCAGILGRDCAEGSGGSPWVAFHGTWF 373

Db 722 -----QLPVLENKVCNRYEYLNKRYSTELCAGLAGVDSCGDSGSPVCEPKKXI 775

QY 374 LVGLVSWGEGGGLHNYGYTKVSRYLDTWTHGHRD 409

Db 776 LGQVTSWGLGCAFPNKPQYVYVSRFVDMIEREMR 811

RESULT 126
US-08-326-785-1
Sequence 1, Application US/08326785
Patent No. 5792845
GENERAL INFORMATION:
APPLICANT: Folkmann, Judah
APPLICANT: O'Reilly, Michael
TITLE OF INVENTION: Angiostatin and Method of Use
NUMBER OF SEQUENCES: 6
CORRESPONDENCE ADDRESS:
ADDRESSEE: Jones & Askew
STREET: 191 Peachtree Street, 37th Floor
CITY: Atlanta
STATE: Georgia
COUNTRY: USA
ZIP: 30303-1769
COMPUTER READABLE FORM:
MEDIUM TYPE: Diskette, 3.50
COMPUTER: Macintosh
OPERATING SYSTEM: 7.0
SOFTWARE: Microsoft Word
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/326,785
FILING DATE:
CLASSIFICATION: 424
PRIOR APPLICATION DATA:
APPLICATION NUMBER: 08/248,629
FILING DATE: 04/26/94
ATTORNEY/AGENT INFORMATION:
NAME: Larry W. Stults, Ph.D.
REGISTRATION NUMBER: 34,025
REFERENCE/DOCKET NUMBER: 05213-0121
TELECOMMUNICATION INFORMATION:
TELEPHONE: 404-818-3700
TELEFAX: 404-818-3799
INFORMATION FOR SEQ. ID NO. 1:
SEQUENCE CHARACTERISTICS:
LENGTH: 812
TYPE: amino acid
TOPOLOGY: linear
US-08-326-785-1

Query Match 17.7%; Score 412; DB 1; Length 812;
Best Local Similarity 32.1%; Pred. No. 6.3e-27;
Matches 108; Conservative 51; Mismatches 91; Indels 86; Gaps 16;

QY 107 HCYCLEVGV-----WRCSCAPGYKGD--DLQCHPAVKPCCGRPMKMKKSHLRDT 159

Db 529 NYCNPNPDGVNGPW--CYTTPRKLTDYCDIPLCASPSFECKP----- 571

QY 160 EDQEDQYDP-----RLIDGKTRRGSPQVAVLDSKKLA-----CGAVLHPSWTLAA 210

Db 572 -----QVEPKCPGVVGGCVANPHSPWQISL--RTRFGQHFQGGTLAPPEWTLAA 623

QY 211 HCMDESKK--LLVNLGEYDLRMEKMELDIDKEVFV-----HPVYSGTDDNDIALH 262

Db 624 HCLKSRPREFYVILGAH-----EYIRGLDVQELISYAKLILEPN-----NRDIALK 672

QY 263 LAQPATLSQTIIVPICLPDSG--LAERLNOAQOETLVTWG-----YHSSREKAKANNRT 315

Db 673 LSRPATITDVIPACIPSPNMYVADRIT-----CYITGWEOTGTFGAGRKEA----- 721

QY 316 FVNLFIKIPVYHNCS--EYMSNMYSENMLCAGILGRDCAEGSGGSPWVAFHGTWF 373

Db 722 -----QLPVLENKVCNRYEYLNKRYSTELCAGLAGVDSCGDSGSPVCEPKKXI 775

QY 374 LVGLVSWGEGGGLHNYGYTKVSRYLDTWTHGHRD 409

Db 776 LOGVTSWGLGACARPKRGVYRVRSFVMIEREMRN 811

RESULT 127

US-08-612-788-1
Sequence 1, Application US/08612788
Patent No. 5837682
GENERAL INFORMATION:
APPLICANT: Folkman, M. Judah
APPLICANT: O'Reilly, Michael
APPLICANT: Cao, Yihai
APPLICANT: Sim, B. Kim Lee
TITLE OF INVENTION: Angiostatin Fragments and Method of Use
NUMBER OF SEQUENCES: 45
CORRESPONDENCE ADDRESS:
ADDRESSEE: Jones & Askew
STREET: 191 Peachtree Street, 37th Floor
CITY: Atlanta
STATE: Georgia
COUNTRY: U.S.
ZIP: 30303-1769
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/612,788
FILING DATE:
CLASSIFICATION: 514
ATTORNEY/AGENT INFORMATION:
NAME: Warren, William L.
REGISTRATION NUMBER: 36,714
REFERENCE/DOCKET NUMBER: 05213-0126
TELECOMMUNICATION INFORMATION:
TELEPHONE: 404-818-3700
TELEFAX: 404-818-3799
INFORMATION FOR SEQ ID NO: 1:
SEQUENCE CHARACTERISTICS:
LENGTH: 812 amino acids
TYPE: amino acid
STRANDEDNESS:
TOPOLOGY: linear
MOLECULE TYPE: protein
HYPOTHETICAL: NO
ANTI-SENSE: NO
FRAGMENT TYPE: N-terminal
ORIGINAL SOURCE:
ORGANISM: Murine
IMMEDIATE SOURCE:
CLONE: Plasmidogen
US-08-612-788-1

Query Match 17.7%; Score 412; DB 2; Length 812;
Best Local Similarity 32.1%; Pred. No. 6.3e-27;
Matches 108; Conservative 51; Mismatches 91; Indels 86; Gaps 16;

QY 107 HCLAEVGV-----WRSCAPGYKLD--DLLQCHPAVYFGGRPMKMKKRSLSLKDT 159
Db 529 NYCNPDDGVNGPW--CYTTPRKLYDYCDIPLCASASSFECGR----- 571
QY 160 EDGEDVDP-----RLIDGMTRRGDSFWQVVLDSKKLA---CGAVLIHPSWLTAA 210
Db 572 -----QVEPKKCGRRVVGCCVAPHSWPQIISL---RTFTQGHFGGTLIAPEWLTAA 623
QY 211 HMDDESKK--LVRIGEYDLRMEKMLDIDKEVFV-----HPNYSKSTTDNDIALH 262
Db 624 HCLKSSRREPKYKILGAH-----BEYIRGLDYQEIISVAKLILPN-----NRDIALK 672
QY 263 LAQPTLSQTIIVPICLPDSG--LAERELNQAQGETLVGTWG-----YHSREKAKRRT 315
Db 673 LSRPATITDKVIVPACLPSPVYVADRTI-----CYITGEGTGTGAGRLKEA----- 721

QY 316 FVLNPIKIPVPHNCS--EWSMNVSENNLCAGILDRGDACEBDSGAPWYASFHGTWF 373
Db 722 -----QLPVIENKCKCRVYELINNRKSTELCAGLAGVDSQGDSPGLVCFEKDKYI 775
QY 374 LVGLVSWGRGGLHNHYCYTKVSRYLWIRGHIRD 409
Db 776 LOGVTSWGLGACARPKRGVYRVRSFVMIEREMRN 811

RESULT 128

US-08-605-598B-1
Sequence 1, Application US/08605598B
Patent No. 5861372
GENERAL INFORMATION:
APPLICANT: Folkman, M. Judah
APPLICANT: Lin, Jie
APPLICANT: O'Reilly, Michael S.
TITLE OF INVENTION: Aggregat Angiostatin and Method of Use
NUMBER OF SEQUENCES: 6
CORRESPONDENCE ADDRESS:
ADDRESSEE: Jones & Askew
STREET: 191 Peachtree Street, 37th Floor
CITY: Atlanta
STATE: Georgia
COUNTRY: U.S.
ZIP: 30303-1769
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/605,598B
FILING DATE: 22-FEB-1996
CLASSIFICATION: 514
ATTORNEY/AGENT INFORMATION:
NAME: Warren, William L.
REGISTRATION NUMBER: 36,714
REFERENCE/DOCKET NUMBER: 05213-0127
TELECOMMUNICATION INFORMATION:
TELEPHONE: 404-818-3700
TELEFAX: 404-818-3799
INFORMATION FOR SEQ ID NO: 1:
SEQUENCE CHARACTERISTICS:
LENGTH: 812 amino acids
TYPE: amino acid
STRANDEDNESS:
TOPOLOGY: linear
MOLECULE TYPE: peptide
ORIGINAL SOURCE:
ORGANISM: Murine Plasmidogen
US-08-605-598B-1

Query Match 17.7%; Score 412; DB 2; Length 812;
Best Local Similarity 32.1%; Pred. No. 6.3e-27;
Matches 108; Conservative 51; Mismatches 91; Indels 86; Gaps 16;

QY 107 HCLAEVGV-----WRSCAPGYKLD--DLLQCHPAVYFGGRPMKMKKRSLSLKDT 159
Db 529 NYCNPDDGVNGPW--CYTTPRKLYDYCDIPLCASASSFECGR----- 571
QY 160 EDGEDVDP-----RLIDGMTRRGDSFWQVVLDSKKLA---CGAVLIHPSWLTAA 210
Db 572 -----QVEPKKCGRRVVGCCVAPHSWPQIISL---RTFTQGHFGGTLIAPEWLTAA 623
QY 211 HMDDESKK--LVRIGEYDLRMEKMLDIDKEVFV-----HPNYSKSTTDNDIALH 262
Db 624 HCLKSSRREPKYKILGAH-----BEYIRGLDYQEIISVAKLILPN-----NRDIALK 672
QY 263 LAQPTLSQTIIVPICLPDSG--LAERELNQAQGETLVGTWG-----YHSREKAKRRT 315
Db 673 LSRPATITDKVIVPACLPSPVYVADRTI-----CYITGEGTGTGAGRLKEA----- 721

```

QY 211 HOMESK--LIVLGGYDLRWEKMEIDLIKEVIV-----HPNNSITDNLIALH 262
Db 624 HLEKSRPEPFKVIILGSH-----BEYIRGLDVQELISVAKLILPN-----NRDIALLK 672
QY 263 LAQPAITSCVITVETLPLSG--LAELNONGGOTLVWG-----HHSREKEKNRT 315
Db 673 LSRAPIITDVIPLACLPENMVADETI-----CYTWMGTGTFGAERLKEA----- 721
QY 316 PLFNLIKLIPVFNHCS--EYASNWSENMLCAGILDRQDACBDSSGPMVASFHGTWF 373
Db 722 -----QPILENKVCNVEYILNRKSTELCAQLAGVDSGQDSGLVCFEKDKYI 775
QY 374 LVGLVSWGCGGLHNYGYTKVSRYLDMTHIGIRD 409
Db 776 LGQVTSWGLCARNPKNGVYVRFVSDIEREMRN 811

RESULT 130
US-08-866-735-1
; Sequence 1, Application US/08866735
; Patent No. 5945403
;
; GENERAL INFORMATION:
; APPLICANT: Folkart, M. Judah
; APPLICANT: O'Reilly, Michael
; TITLE OF INVENTION: Angiostatin Fragments and Method of Use
; NUMBER OF SEQUENCES: 6
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Jones & Askew, LLP
; STREET: 191 Peachtree Street, 37th Floor
; CITY: Atlanta
; STATE: Georgia
; COUNTRY: USA
; ZIP: 30303-1769
;
; COMPUTER READABLE FORM:
;
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: Patent Release #1.0, Version #1.30
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/866,735
; FILING DATE: 30-MAY-1997
; CLASSIFICATION: 435
; ATTORNEY/AGENT INFORMATION:
; NAME: Warren, William L.
; REGISTRATION NUMBER: 36,714
; REFERENCE/DOCKET NUMBER: 05940-0129
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: (404) 818-3700
; TELEFAX: (404) 818-3799
; INFORMATION FOR SEQ ID NO: 1:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 812 amino acids
; TYPE: amino acid
; STRANDEDNESS:
; TOPOLOGY: linear
; MOLECULE TYPE: protein
; HYPOTHEetical: NO
; ANTI-SENSE: NO
; FRAGMENT TYPE: N-terminal
; ORIGINAL SOURCE:
; ORGANISM: Murine
; IMMEDIATE SOURCE:
; CLONE: Plasmidogen
;
; US-08-866-735-1
;
; Query Match 17.7%; Score 412; DB 2; Length 812;
; Best Local Similarity 32.1%; Pred. No. 6.3e-27;
; Matches 108; Conservative 51; Mismatches 91; Indels 86; Gaps 16
;
; 107 HYLAEVGG-----MRCSCAPGVKLGD--DLQCHEAVKFCGEPWKEKKRSHLRDT 159
; :|||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:
; 523 HVCNPNPGVGNPW--CYTINPRKLYDVCDIPICASSSFFCGKP----- 571

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QY 160 EDGEDVDP-----RLIDGKTRRGDSPWQVVLDSKKLA-----CGAVLIHPSWVLTAA 210
D 572 -----QVEPKKCPGRVGGCVANPHSWPMQISL-----RTREFTGQHFCGGTILAPRWVLTAA 623
QY 211 HMDDESKK---LLVRLGEYDLRMEKMLDLDIKVEV-----HPNYSKSTNDIALH 262
D 624 HCLEKSSRPEFYKVLGAH-----EYIRGLDVOEISVAKLILEPN-----NRDIALLK 672
QY 263 LAOPATLSQTVIPICLPDSG--LAERELNQAQETLVTGNG-----YHSREKAKRNET 315
D 673 LSRPATITTDKVIPLCLPSPMVADRTI-----CYITGNGETQGTFGAGRLKEA----- 721
QY 316 FVNLPIKIPVPHNECS--EWSNMVSENMLCAGILSDRODACEDSGGPMVASFHGTWF 373
D 722 -----QLPVIENKVCNRVEYLNRRVKSTELCAQOLAGVDSQGDGAPLVCEKDKXTI 775
QY 374 LVGLVSWGEGGGLAHNYGYTKVSRYLDMIGHIRD 409
D 776 LVGLVSWGLGCAEPKPKGVYRVSRFVDWIEREMKN 811

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RESULT 131

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US-09-066-028-1
Sequence 1, Application US/09066028

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GENERAL INFORMATION:
PATENT NO. 6024688
APPLICANT: Folkman, M. Judah
APPLICANT: O'Reilly, Michael
APPLICANT: Cao, Yihai
APPLICANT: Sim, B. Kim Lee
TITLE OF INVENTION: Angiostatin Fragments and Method of Use
NUMBER OF SEQUENCES: 45
CORRESPONDENCE ADDRESS:
ADDRESS: 191 Peachtree Street, 37th Floor
CITY: Atlanta
STATE: Georgia
COUNTRY: U.S.
ZIP: 30303-1769
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patientin Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/09/066, 028
FILING DATE:
CLASSIFICATION:
PRIORITY APPLICATION DATA:
APPLICATION NUMBER: 08/612,788
FILING DATE:
ATTORNEY/AGENT INFORMATION:
NAME: Marten, William L.
REGISTRATION NUMBER: 36,714
REFERENCE/DOCKET NUMBER: 05213-0126
TELEPHONE: 404-818-3700
TELEFAX: 404-818-3799
INFORMATION FOR SEQ ID NO: 1:
SEQUENCE CHARACTERISTICS:
LENGTH: 812 amino acids
TYPE: amino acid
STRANDEDNESS:
TOPOLOGY: linear
MOLECULE TYPE: protein
HYPOTHETICAL: NO
ANTI-SENSE: NO
FRAGMENT TYPE: N-terminal
ORIGINAL SOURCE:
ORGANISM: Ratine
IMMEDIATE SOURCE:
CLONE: Plasmidogen

```

US-09-066-028-1

```

Query Match 17.7%; Score 412; DB 3; Length 812;
Best Local Similarity 32.1%; Pred. No. 6,3e-27;
Matches 108; Conservative 51; Mismatches 91; Indels 86; Gaps 16;

```

```

QY 107 HXCLEEVG-----WRSCAPGYKGD--DLQCHPAVKEPCGRPMKMEKRSKRLKRT 159
D 529 NYCANPDGVDNGPW--CYTTPRKLYDYCDIFLCASHSFSGKF----- 571
QY 160 EDGEDVDP-----RLIDGKTRRGDSPWQVVLDSKKLA-----CGAVLIHPSWVLTAA 210
D 572 -----QVEPKKCPGRVGGCVANPHSWPMQISL-----RTREFTGQHFCGGTILAPRWVLTAA 623
QY 211 HMDDESKK---LLVRLGEYDLRMEKMLDLDIKVEV-----HPNYSKSTNDIALH 262
D 624 HCLEKSSRPEFYKVLGAH-----EYIRGLDVOEISVAKLILEPN-----NRDIALLK 672
QY 263 LAOPATLSQTVIPICLPDSG--LAERELNQAQETLVTGNG-----YHSREKAKRNET 315
D 673 LSRPATITTDKVIPLCLPSPMVADRTI-----CYITGNGETQGTFGAGRLKEA----- 721
QY 316 FVNLPIKIPVPHNECS--EWSNMVSENMLCAGILSDRODACEDSGGPMVASFHGTWF 373
D 722 -----QLPVIENKVCNRVEYLNRRVKSTELCAQOLAGVDSQGDGAPLVCEKDKXTI 775
QY 374 LVGLVSWGEGGGLAHNYGYTKVSRYLDMIGHIRD 409
D 776 LVGLVSWGLGCAEPKPKGVYRVSRFVDWIEREMKN 811

```

RESULT 132

```

US-09-192-012-3
Sequence 3, Application US/09192012A

```

```

GENERAL INFORMATION:
PATENT NO. 6475784
APPLICANT: Papkoff, Jackie
APPLICANT: Megaloc Corporation
APPLICANT: Pfizer, Inc.
TITLE OF INVENTION: Inhibition of Angiogenesis by Delivery of Nucleic Acids
FILE REFERENCE: 018484-0001100S
CURRENT APPLICATION NUMBER: US/09/192, 012A
CURRENT FILING DATE: 1998-11-13
EARLIER APPLICATION NUMBER: US 60/066, 020
EARLIER FILING DATE: 1997-11-14
NUMBER OF SEQ ID NOS: 9
SOFTWARE: Patientin Ver. 2.0
SEQ ID NO 3
LENGTH: 812
TYPE: PRT
ORGANISM: Mus sp.
FEATURE:
OTHER INFORMATION: mouse plasmidogen
US-09-192-012-3

```

```

Query Match 17.7%; Score 412; DB 4; Length 812;
Best Local Similarity 32.1%; Pred. No. 6,3e-27;
Matches 108; Conservative 51; Mismatches 91; Indels 86; Gaps 16;

```

```

QY 107 HXCLEEVG-----WRSCAPGYKGD--DLQCHPAVKEPCGRPMKMEKRSKRLKRT 159
D 529 NYCANPDGVDNGPW--CYTTPRKLYDYCDIFLCASHSFSGKF----- 571
QY 160 EDGEDVDP-----RLIDGKTRRGDSPWQVVLDSKKLA-----CGAVLIHPSWVLTAA 210
D 572 -----QVEPKKCPGRVGGCVANPHSWPMQISL-----RTREFTGQHFCGGTILAPRWVLTAA 623
QY 211 HMDDESKK---LLVRLGEYDLRMEKMLDLDIKVEV-----HPNYSKSTNDIALH 262
D 624 HCLEKSSRPEFYKVLGAH-----EYIRGLDVOEISVAKLILEPN-----NRDIALLK 672
QY 263 LAOPATLSQTVIPICLPDSG--LAERELNQAQETLVTGNG-----YHSREKAKRNET 315

```

Db 673 LSRPATITDKVTPACLPSPNNVADRTT-----CYTGMGELOGTGAGRLKEA----- 721
QY 316 FVLNFIKIPVYPHNECS--EYWSNNVSENMLCAGILGRQDACBGDSGGPMVASFHGTWF 373
Db 722 -----QPLVENKVCNRYEYLNINRVKSTELCAGQLAGVDSGCCDSGGPLVCFEKDKYI 775
QY 374 LVGLVWSGEGCGLLHNYGYTKYSRYLDWTHGIRD 409
Db 776 LOGVTSWGLGCRPNKPGVYVRSFVDMTEREMN 811

RESULT 133
US-09-335-325-1
Sequence 1, Application US/09335325
Patent No. 6521439
GENERAL INFORMATION:
APPLICANT: Folkman, M. Judah
O'Reilly, Michael
Cao, Yihai
Siu, B. Kim Lee
TITLE OF INVENTION: Angiostatin Fragments and Method of Use
NUMBER OF SEQUENCES: 45
CORRESPONDENCE ADDRESS:
ADDRESSEE: Jones & Askew
STREET: 191 Peachtree Street, 37th Floor
CITY: Atlanta
STATE: Georgia
COUNTRY: U.S.
ZIP: 30303-1769
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patent In Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/09/335,325
FILING DATE: 17-Jun-1999
CLASSIFICATION: <Unknown>
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US/08/612,788
FILING DATE: <Unknown>
ATTORNEY/AGENT INFORMATION:
NAME: Warren, William L.
REGISTRATION NUMBER: 36,714
REFERENCE/DOCKET NUMBER: 05213-0126
TELECOMMUNICATION INFORMATION:
TELEPHONE: 404-618-3799
TELEFAX: 404-618-3799
INFORMATION FOR SEQ ID NO: 1:
SEQUENCE CHARACTERISTICS:
LENGTH: 812 amino acids
TYPE: amino acid
STRANDEDNESS: <Unknown>
TOPOLOGY: linear
MOLECULE TYPE: protein
HYPOTHETICAL: NO
ANTI-SENSE: NO
FRAGMENT TYPE: N-terminal
ORIGINAL SOURCE:
ORGANISM: Murine
IMMEDIATE SOURCE:
CLONE: Plasmidogen
SEQUENCE DESCRIPTION: SEQ ID NO: 1:
US-09-335-325-1

Query Match 17.7%; Score 412; DB 4; Length 812;
Best Local Similarity 32.1%; Pred. No. 6,3e-27;
Matches 108; Conservative 51; Mismatches 91; Indels 86; Gaps 16;

QY 107 HYLCEEVG-----WRCSCAGYKLGD--DLQCHPAVKPPCRPMKMKKKRSHLRKDT 159
Db 529 NVCNRPDGVNGPW--CYTTPRKLVDYCDIPLCASASSFECGKP----- 571

QY 160 EDOEDQVDP-----RLIDCKMTRGDSPMQVLLDSKKLA-----CGAVLIHPSWTLIPA 210
Db 572 -----QVEPKCKGRVAVGCVANRHSWPKQISL--RIRFTGQHFGGTLINPEVTLRA 623
QY 211 HCMDESKK--LLVRIGEXYDLRWEKWEILDIKEVYV----HPNYSKSTDRNDIALIH 262
Db 624 HCLESSRPERYKVLIGAH-----EYIRGLDYOELISVAKILBPN-----NRDIALIK 672
QY 263 LAOPATLSQITVPLCLPDSG--LAERELNQAQGTILYVQMG-----YHSSREKAKRNT 315
Db 673 LSRPATITDKVTPACLPSPNNVADRTT-----CYTGMGELOGTGAGRLKEA----- 721
QY 316 FVLNFIKIPVYPHNECS--EYWSNNVSENMLCAGILGRQDACBGDSGGPMVASFHGTWF 373
Db 722 -----QPLVENKVCNRYEYLNINRVKSTELCAGQLAGVDSGCCDSGGPLVCFEKDKYI 775
QY 374 LVGLVWSGEGCGLLHNYGYTKYSRYLDWTHGIRD 409
Db 776 LOGVTSWGLGCRPNKPGVYVRSFVDMTEREMN 811

RESULT 134
US-08-991-761A-12
Sequence 12, Application US/08991761A
Patent No. 6576609
GENERAL INFORMATION:
APPLICANT: Soff, Gerald
APPLICANT: Gately, Stephen
APPLICANT: Twardowski, Przemyslaw
TITLE OF INVENTION: "Methods and Compositions for Generating
NUMBER OF SEQUENCES: 16
CORRESPONDENCE ADDRESS:
ADDRESSEE: Sheridan Rose P.C.
STREET: 1700 Lincoln St., Suite 3500
CITY: Denver
STATE: CO
COUNTRY: USA
ZIP: 80203
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patent In Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/991,761A
FILING DATE:
CLASSIFICATION: 1642
ATTORNEY/AGENT INFORMATION:
NAME: Crook, Wanneil M.
REGISTRATION NUMBER: 31,071
REFERENCE/DOCKET NUMBER: 3501-16-1
TELECOMMUNICATION INFORMATION:
TELEPHONE: (303) 863-9700
TELEFAX: (303) 863-0223
INFORMATION FOR SEQ ID NO: 12:
SEQUENCE CHARACTERISTICS:
LENGTH: 812 amino acids
TYPE: amino acid
STRANDEDNESS: single
TOPOLOGY: linear
MOLECULE TYPE: protein
US-08-991-761A-12

Query Match 17.7%; Score 412; DB 4; Length 812;
Best Local Similarity 32.1%; Pred. No. 6,3e-27;
Matches 108; Conservative 51; Mismatches 91; Indels 86; Gaps 16;

QY 107 HYLCEEVG-----WRCSCAGYKLGD--DLQCHPAVKPPCRPMKMKKKRSHLRKDT 159
Db 529 NVCNRPDGVNGPW--CYTTPRKLVDYCDIPLCASASSFECGKP----- 571

Query Match	17.7%;	Score 412;	DB 5;	Length 812;
Best Local Similarity	32.1%;	Pred. No. 6.3e-27;		
Matches 108;	Conservative 51;	Mismatches 91;	Indels 86;	Gaps 16;

Query Match	17.7%	Score 410.5;	DB 3;	Length 249;
Best Local Similarity	35.0%;	Pred. No. 2e-27;		
Matches	92;	Mismatches	96;	Indels 33; Gaps 8
QY	166	VDPRLIDGKTRGRGSPQGVLLDSKKL-----ACAGVLIHPSPVLTAAHCKDSESK	218	
	:::::	:::::	:::::	:

RESULT 143
 US-07-654-603-2
 Sequence 2, Application US/07654603
 Patent No. 5637492
 GENERAL INFORMATION:
 APPLICANT: Dawson, Keith M
 APPLICANT: Edwards, Richard M
 APPLICANT: Porman, Joan M
 TITLE OF INVENTION: Activatable fibrinolytic and
 anti-thrombotic proteins
 NUMBER OF SEQUENCES: 40
 CORRESPONDENCE ADDRESS:
 ADDRESSEE: Dr John J. McDonnell
 STREET: Ten South Wacker Drive, Suite 3000
 CITY: Chicago
 STATE: IL
 COUNTRY: USA
 ZIP: 60606
 COMPUTER READABLE FORM.
 MEDIUM TYPE: Floppy disk
 COMPUTER: IBM PC compatible
 OPERATING SYSTEM: PC-DOS/MS-DOS
 SOFTWARE: Patent in Release #1.0, Version #1.25
 CURRENT APPLICATION DATA:
 APPLICATION NUMBER: US/07/854,603
 FILING DATE: 19901207
 CLASSIFICATION:
 ATTORNEY/AGENT INFORMATION:
 NAME: McDonnell, John J
 REGISTRATION NUMBER: 26,949
 REFERENCE/DOCKET NUMBER: 92,338
 TELECOMMUNICATION INFORMATION:
 TELEPHONE: 312-715-1000
 TELEFAX: 312-715-1234
 TELEX: 910-221-5317
 INFORMATION FOR SEQ ID NO: 2:
 SEQUENCE CHARACTERISTICS:
 LENGTH: 810 amino acids
 TYPE: AMINO ACID

```

QY      81 RSMERBFCOEYVFLNGLSLNDGCGTNYCLEBYGMRGSCAFYKGLGD--DLQGCHPVTX 138
Db      523 RAGLEKNYR-----NPDGVG-----PW--CYTNPRKLYDVDPQC--APS 554

QY      139 PFGGRWMEKRSKSHLKQTEDEQDYPD---RLDGMRTRGDSFPOVVLDSKK 193
Db      565 FDOGRP-----QVEPRCKPGYVGGVGAHPHSPMPVOYSLETFRGM 604

QY      194 LAGAVLLHPSWVLTAAHCHDESK--LIVRLGEVDLREKNEKLDLDIKFVHPNYS 250
Db      605 HFGGGLISPEWVLTAAHCLMSPPRSYKVLIGAHQVNLREPHVGEIYSRLPLEP--- 661

QY      251 KSTTNDVALLHQAQPTTSSQTVPLCLPDSG--LAEKRLNQAQETLTLYGCHSSSEK 308
Db      662 ---TRDIALKLKSSPVTITDEVIPALCLSPSNVADR-----TECFITG-- 705

QY      309 EAKNRRTFLVNFIR---IPVPHNECS--EYMSNWSSENLCAGLIEDRODABDGSAP 363
Db      706 --ELQGFAGGLLBEAQDLPIYENKVCNRYEFLNGRVQSTELCAHGLAGTDSQQDSDGAP 763

QY      364 MYASFHGTWFLVLGVSNBGCGLLNHYQVTKYSRLDMHSHIRL 409
Db      764 LVCEKDKTLLQGVTSGLGACAPRNKCPVYRYSKRVTLIGVWEN 809

```

RESULT 144-000B-29
 US-08-147-000B-29
 Sequence 29 Application US/08147000B
 Patent No. 5688664
 GENERAL INFORMATION:
 APPLICANT: Dawson, Keith M
 APPLICANT: Hunter, Michael G
 APPLICANT: Gilbert, Richard J
 TITLE OF INVENTION: THROMBIN ACTIVATABLE PLASMINOGEN ANALOGUES
 NUMBER OF SEQUENCES: 29
 CORRESPONDENCE ADDRESS:
 ADDRESSEE: Banner & Allegretti, Ltd.
 STREET: 1001 G Street, N.W.
 CITY: Washington, D.C.
 STATE:
 COUNTRY: USA
 ZIP: 20001
 COMPUTER READABLE FORM:
 MEDIUM TYPE: Floppy disk
 COMPUTER: IBM PC Compatible
 OPERATING SYSTEM: PC-DOS/MS-DOS
 SOFTWARE: Word Perfect 5.1
 CURRENT APPLICATION DATA:
 APPLICATION NUMBER: US/08/147,000B
 FILING DATE: October 29, 1993
 CLASSIFICATION: 435
 PRIOR APPLICATION DATA:
 APPLICATION NUMBER: US 07/854,603
 FILING DATE: June 4, 1992
 APPLICATION NUMBER: GB 92 22758.6
 FILING DATE: October 29, 1992
 APPLICATION NUMBER: PCT/GB90/01912
 FILING DATE: December 7, 1990
 ATTORNEY/AGENT INFORMATION:
 NAME: Hoeschel, Dale H.
 REGISTRATION NUMBER: 19, 090
 REFERENCE/DOCKET NUMBER: 10180, 60948
 TELECOMMUNICATION INFORMATION:
 TELEPHONE: 202-508-9100
 TELEFAX: 202-508-9200

INFORMATION FOR SEQ ID NO: 29:
SEQUENCE CHARACTERISTICS:
LENGTH: 810 amino acids
TYPE: amino acid
TOPOLOGY: linear
MOLECULE TYPE: protein
US-08-147-000B-29

Query Match 17.6%; Score 410; DB 1; Length 810;
Best Local Similarity 31.8%; Pred. No. 9.3e-27;
Matches 110; Conservative 47; Mismatches 113; Indels 76; Gaps 14;

QY 81 RSGMEGRFOGRVSEFLNCSLDNGGCTHYCLEEVGRRCSCAPGYKLGD--DLIQCHPAVK 138
DB 523 RAGLEKNYCR-----NPGDVG-----PW--CTTNPRKLYDCVPC--AAPS 564
QY 139 FPGGRPKMEKKRSHLRDTEDEQVDP-----RLIDGRKTRGDSFMQVVLDSKKK 193
DB 565 FDCGKP-----QVEPKKCPGRVVGCVAHPSHWQVSLRTFRGM 604
QY 194 LAGCAVLHPSWVTLTAHCHMDESK--LLVRLGEYDLARKMEWELDDIKEYEVHPNYS 250
DB 605 HFCGGTLLSPFWVTLTAHCHCKSPSSRYKVLGAHQEVNLEPHVQELVSRLEFLP--- 661
QY 251 KSTTDNDIALHLAQPATLSQTIPICLPDSG--LAERINQAGQETLVYGMGHSRREK 308
DB 662 ---TRKDIALKLSSPAVITDKVLPACLPSPNYVADR-----TECFITGMG----- 705
QY 309 EAKNRFTVLFNFK--IPVYVHNECS--EYMSNMVSEMLCAGILGDRQDACEGDSGSP 363
DB 706 --ETQGTFGAGLKEAQLPVLENKVCNRYEFLNGRVOSTELCAGHLAAGTDSQGDGSGSP 763
QY 364 MVAHFHGTWFLVGLVSWGEGCGLHRYGVYTKVSRXYLDMHIGIRD 409
DB 764 LVCEKDKYTLQGVTSWGLGCAHPKPKGVYVRSRFTVLEGMEN 809

RESULT 145

US-09-086-514-1
Sequence 1, Application US/09086514

PATENT No. 6218517
GENERAL INFORMATION:
APPLICANT: SUZUKI, Kazuyasu
TITLE OF INVENTION: A METHOD HAVING A VASCULARIZATION INHIBITORY EFFECT AND
TITLE OF INVENTION: A METHOD FOR PRODUCTION THEREOF AND A METHOD FOR
TITLE OF INVENTION: PRODUCING ANGIOSTATIN
FILE REFERENCE: 092303-005
CURRENT FILING DATE: 1998-05-28
EARLIER APPLICATION NUMBER: JP 317250/1996
EARLIER FILING DATE: 1996-11-28
NUMBER OF SEQ ID NOS: 1
SOFTWARE: PatentIn Ver. 2.0
SEQ ID NO 1
LENGTH: 810
TYPE: PRT
ORGANISM: Human plasminogen
FEATURE:
NAME/KEY: SIGNAL
LOCATION: (1)..(19)
US-09-086-514-1

Query Match 17.6%; Score 410; DB 3; Length 810;
Best Local Similarity 31.8%; Pred. No. 9.3e-27;
Matches 110; Conservative 47; Mismatches 113; Indels 76; Gaps 14;

QY 81 RSGMEGRFOGRVSEFLNCSLDNGGCTHYCLEEVGRRCSCAPGYKLGD--DLIQCHPAVK 138
DB 523 RAGLEKNYCR-----NPGDVG-----PW--CTTNPRKLYDCVPC--AAPS 564
QY 139 FPGGRPKMEKKRSHLRDTEDEQVDP-----RLIDGRKTRGDSFMQVVLDSKKK 193
DB 565 FDCGKP-----QVEPKKCPGRVVGCVAHPSHWQVSLRTFRGM 604

QY 194 LAGCAVLHPSWVTLTAHCHMDESK--LLVRLGEYDLARKMEWELDDIKEYEVHPNYS 250
DB 605 HFCGGTLLSPFWVTLTAHCHCKSPSSRYKVLGAHQEVNLEPHVQELVSRLEFLP--- 661
QY 251 KSTTDNDIALHLAQPATLSQTIPICLPDSG--LAERINQAGQETLVYGMGHSRREK 308
DB 662 ---TRKDIALKLSSPAVITDKVLPACLPSPNYVADR-----TECFITGMG----- 705
QY 309 EAKNRFTVLFNFK--IPVYVHNECS--EYMSNMVSEMLCAGILGDRQDACEGDSGSP 363
DB 706 --ETQGTFGAGLKEAQLPVLENKVCNRYEFLNGRVOSTELCAGHLAAGTDSQGDGSGSP 763
QY 364 MVAHFHGTWFLVGLVSWGEGCGLHRYGVYTKVSRXYLDMHIGIRD 409
DB 764 LVCEKDKYTLQGVTSWGLGCAHPKPKGVYVRSRFTVLEGMEN 809

RESULT 146

US-09-192-012-5
Sequence 5, Application US/09192012A

PATENT No. 6475784
GENERAL INFORMATION:
APPLICANT: Papkoft, Jackie
APPLICANT: Megabios Corporation
APPLICANT: Pfizer, Inc.
TITLE OF INVENTION: Inhibition of Angiogenesis by Delivery of Nucleic Acids
TITLE OF INVENTION: Encoding Anti-Angiogenesis Polypeptides
FILE REFERENCE: 018484-000110US
CURRENT FILING DATE: 1997-11-13
EARLIER APPLICATION NUMBER: US 60/066,020
EARLIER FILING DATE: 1997-11-14
NUMBER OF SEQ ID NOS: 9
SOFTWARE: PatentIn Ver. 2.0
SEQ ID NO 5
LENGTH: 810
TYPE: PRT
ORGANISM: Homo sapiens
US-09-192-012-5

Query Match 17.6%; Score 410; DB 4; Length 810;
Best Local Similarity 31.8%; Pred. No. 9.3e-27;
Matches 110; Conservative 47; Mismatches 113; Indels 76; Gaps 14;

QY 81 RSGMEGRFOGRVSEFLNCSLDNGGCTHYCLEEVGRRCSCAPGYKLGD--DLIQCHPAVK 138
DB 523 RAGLEKNYCR-----NPGDVG-----PW--CTTNPRKLYDCVPC--AAPS 564
QY 139 FPGGRPKMEKKRSHLRDTEDEQVDP-----RLIDGRKTRGDSFMQVVLDSKKK 193
DB 565 FDCGKP-----QVEPKKCPGRVVGCVAHPSHWQVSLRTFRGM 604
QY 194 LAGCAVLHPSWVTLTAHCHMDESK--LLVRLGEYDLARKMEWELDDIKEYEVHPNYS 250
DB 605 HFCGGTLLSPFWVTLTAHCHCKSPSSRYKVLGAHQEVNLEPHVQELVSRLEFLP--- 661
QY 251 KSTTDNDIALHLAQPATLSQTIPICLPDSG--LAERINQAGQETLVYGMGHSRREK 308
DB 662 ---TRKDIALKLSSPAVITDKVLPACLPSPNYVADR-----TECFITGMG----- 705
QY 309 EAKNRFTVLFNFK--IPVYVHNECS--EYMSNMVSEMLCAGILGDRQDACEGDSGSP 363
DB 706 --ETQGTFGAGLKEAQLPVLENKVCNRYEFLNGRVOSTELCAGHLAAGTDSQGDGSGSP 763
QY 364 MVAHFHGTWFLVGLVSWGEGCGLHRYGVYTKVSRXYLDMHIGIRD 409
DB 764 LVCEKDKYTLQGVTSWGLGCAHPKPKGVYVRSRFTVLEGMEN 809

RESULT 147

US-09-403-736-1
Sequence 1, Application US/09403736

TOPOLOGY: linear
US-09-016-366A-23

Query Match 17.6%; Score 409.5; DE 2; Length 267;
Best Local Similarity 36.2%; Pred. No. 2.6e-27;
Matches 92; Conservative 38; Mismatches 101; Indels 23; Gaps 7;

```

QY 170 LIIQKHTRGDSPPQVVL--LDSKKLACGAVLIHPSVLTPLAQMDSESKLLVGEYD 227
      :::::|||||:::|||||:::|||||:::|||||:::|||||:::|||||:::
Db 23 IVGGQAPRPSKKPQVQSLRDRDRYMMHCCSSLIHFQWLTALACQEDVQDLAL-RYQ 81
      :::::|||||:::|||||:::|||||:::|||||:::|||||:::|||||:::
QY 228 LRREKMKELD-LDIKEVPHENYSKSTTDNDIALHLHAQPAITLSQTIYDCLPDSGLAE 295
      :::::|||||:::|||||:::|||||:::|||||:::|||||:::|||||:::
Db 82 LRQHLYYQDQLPSPRIIVHPQFYTAQIGADIALLELEEPKYSSTHVTLPKAS-- 138
      :::::|||||:::|||||:::|||||:::|||||:::|||||:::|||||:::
QY 286 RLNNQSGQETLVATGWGSHSREKAKRTEVNLPIKIRVPHNCEGYSVS----- 336
      :::::|||||:::|||||:::|||||:::|||||:::|||||:::|||||:::
Db 139 -ETPEPMPQWATGCG--DVDNDELRPPPLIQVQKVPIMENHLCAKTHLGATYGDV 194
      :::::|||||:::|||||:::|||||:::|||||:::|||||:::|||||:::
QY 337 NMVSENNLTCAGLIGERODACEGDSGGPVMYASFHGIVFLVGLVSMGEGCGLLHNHYGTYKV 366
      :::::|||||:::|||||:::|||||:::|||||:::|||||:::|||||:::
Db 195 RIVADMLTCAG--NTRRDSQCGDSGGPIVCKVNGTLMQLGVVSWGEGCAQPNRPYITRYV 252a
      :::::|||||:::|||||:::|||||:::|||||:::|||||:::|||||:::
QY 397 SRKYLDTFHGHIDK 410
      :::::|||||:::|||||:::|||||:::|||||:::|||||:::|||||:::
Db 253 IYVLDMLTHHYVEPK 266
      :::::|||||:::|||||:::|||||:::|||||:::|||||:::|||||:::

```

RESULT 150
US-08-978-404B-18

; Sequence 18, Application US/08978404B

Patent No. 5968782

GENERAL INFORMATION:

APPLICANT: Stevens, Richard L.

TITLE OF INVENTION: MAST CELL PROTEASE THAT CLEAVES
TITLE OF INVENTION: MAST CELL PROTEASE THAT CLEAVES
TITLE OF INVENTION: MAST CELL PROTEASE THAT CLEAVES

TITLE OF INVENTION: FIBRINOGEN NUMBER OF SEQUENCES: 74

NUMBER OF SEQUENCES: 74
CORRESPONDENCE ADDRESS.

CORRESPONDENCE ADDRESS:
ADDRESS: WOLF Greenfield & Sack, P.C.

ADDRESSEE: WOLF, GREENFIELD
STREET: 600 Atlantic Avenue

CITY: Boston
STATE: 600

STATE: MA

COUNTRY: U.S.A.

ZIP: 02210-2211

COMPUTER READABLE FORM:

MEDIUM TYPE: Diskette

COMPUTER: IBM Compatible

OPERATING SYSTEM: DOS

SOFTWARE: FastSEQ for Windows Vers

CURRENT APPLICATION DATA:

APPLICATION NUMBER: US/08/978,404B

FILING DATE: 25-NOV-97

CLASSIFICATION: 435

PRIOR APPLICATION DATA:
APPLICATION NUMBER: 60/033 354

APPLICATION NUMBER: 60/032,354
FILING DATE: 04-DEC-1995

ATTORNEY/AGENT INFORMATION:
FILING DATE: 04-DEC-1998

NAME: Plumer, Elizabeth R.
 ALI: JORNEY/AGENT INFORMATION:

NAME: PLUMER, ELIZABETH R.
REGISTRATION NUMBER: 36,637

REFERENCE/DOCKET NUMBER: B0801/7090

REFERENCE/ DOCUMENT NUMBER:
TELECOMMUNICATION INFORMATION

TELEPHONE: 617-720-3500

TELEFAX: 617-720-2441

TELEX:

INFORMATION FOR SEQ ID NO: 18:

SEQUENCE CHARACTERISTICS:

LENGTH: 267 amino acids

TYPE: amino acid ;

STRANDEDNESS: single

TOPOLOGY: linear

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; MOLECULE TYPE
HS-08-978-404B-19

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Query Match	17.6%;	Score 409.5;	DB 2;	Length 267;
Best Local Similarity	36.2%;	Pred. No. 2.ee-27;		
Matches	92;	Conservative	101;	Indels 23;
		Mismatches	101;	Gaps 77;

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QY      170  LDIGKQTRRGGSPQAVL---LDSKKKLIACGAVLIHPSSVWLTAACHCDBESKRLVHLEBYD  22
      :::::
Db      23  IYGGGEARSRSMWQVSLYKDRYMWHFCCGSLIHPQVWLTAACHVCGPVDKLAAL-RVQ  81
      :::::

QY      228  LRMRKEMLD--LDIKYEVAPHNYSKSTTNDIALHLHAQAPLTSQTYPICLTPSSGLAE  285
      :::::
Db      82  LRFOHLIYQDQDLPIVSRILIVHPQFYLAQIGADIALHLEIEPVKSSMHTVTLIPAS---  138
      :::::

QY      286  RELNAGQGETLVYMGWGHSSSEKAKNRTFVLNFKIPIVPEHNCESEYMS-----  336
      :::::
Db      139  -EITPPKPCWVYISMG---DYVNDERLPPFPPIAQVYKPIIENHNIQAKYHLGAYTGDV  194
      :::::

QY      337  NWVSENNMCAGILIGDQDACEGDSGPMVASFHGTWLVGLVSGBSGGLLNNYGVYTKV  386
      :::::
Db      195  RIVRDPMTCAG--NTRRSDCCGDSGGLVQKNGTWLQAGVSSWGBCAQAPRRPIYTRV  252
      :::::

QY      397  SRVLDMIHGHTRDK  410
      :::::
Db      253  TYTILDMIHHTVPK  266
      :::::

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Search completed: June 14, 2004, 17:48:55
Job time : 34 secs

GenCore version 5.1.6
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OM protein - protein search, using sw model

Run on: June 14, 2004, 17:43:53 ; Search time 59 Seconds

(without alignments)
2006.566 Million cell updates/sec

Title: US-09-997-623-4
Perfect score: 2324

Sequence: 1 ANSPFEEHRSLSRECIPE.....LDWIGHIRKAPQKSNAP 419

Scoring table: BLOSUM62
Gapop 10.0 , Gapext 0.5

Searched: 1586107 seqs, 282547505 residues

Total number of hits satisfying chosen parameters: 1586107

Minimum DB seq length: 0
Maximum DB seq length: 200000000

Post-processing: Minimum Match 0%
Maximum Match 100%

Listing first 150 summaries

Database :

1: Geneseq_29Jan04:*
2: geneseq1980s:*
3: geneseq1990s:*
4: geneseq2000s:*
5: geneseq2001s:*
6: geneseq2002s:*
7: geneseq2003as:*
8: geneseq2003bs:*
9: geneseq2004s:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Query Match	Length	ID	Description
1	2324	100.0	419	4 AAB82673	Aab82673 Wild-type
2	2324	100.0	419	4 AAB36894	Aab36894 Human pro
3	2324	100.0	419	4 AAE08625	Aae08625 Human mat
4	2324	100.0	419	5 AAU99002	AAu99002 Human pro
5	2324	100.0	419	6 ABR55547	ABr55547 Humno aci
6	2324	100.0	419	7 ADC40014	ADc40014 Human act
7	2324	100.0	460	1 AAP81104	APa81104 Sequence
8	2324	100.0	461	1 AAP60001	APa60001 Sequence
9	2324	100.0	461	1 AAP70855	APa70855 Human pro
10	2324	100.0	461	1 AAP90401	APa90401 Zymogen f
11	2324	100.0	461	2 AAR13622	AAr13622 Human pro
12	2324	100.0	461	2 AAR13081	AAr13081 Human pro
13	2324	100.0	461	2 AAR13074	AAr13074 Protein C
14	2324	100.0	461	2 AAR34295	AAr34295 Protein C
15	2324	100.0	461	2 AAU02600	AAu02600 Human pro
16	2324	100.0	461	2 AAU49561	AAu49561 Human lec
17	2324	100.0	461	4 AAB82674	ABa82674 Wild-type
18	2324	100.0	461	4 AAB36895	ABa36895 Human pro
19	2324	100.0	461	4 AAE08626	AAe08626 Human wil
20	2324	100.0	461	5 AAU99001	AAu99001 Human pro
21	2321	99.9	419	5 AAU99035	AAu99035 Human pro
22	2321	99.9	419	5 AAU99031	AAu99031 Human pro
23	2321	99.9	461	1 AAP81205	APa81205 Human pro
24	2321	99.9	461	1 AAP90070	APa90070 Human pro
25	2320	99.8	419	5 AAU99074	AAu99074 Human pro

26	2319	99.8	419	5 AAU99033	AAu99033 Human pro
27	2319	99.8	419	5 AAU99015	AAu99015 Human pro
28	2319	99.8	461	2 AAR33539	AAr33539 Human pro
29	2318	99.7	419	4 AAB36896	ABa36896 Human pro
30	2318	99.7	419	5 AAU99073	AAu99073 Human pro
31	2318	99.7	419	5 AAU99036	AAu99036 Human pro
32	2318	99.7	419	5 AAU99032	AAu99032 Human pro
33	2318	99.7	461	2 AAR13582	AAr13582 Human pro
34	2318	99.7	461	2 AAR13585	AAr13585 Human pro
35	2318	99.7	461	2 AAR13584	AAr13584 Human pro
36	2318	99.7	461	2 AAR33584	AAr33584 Protein C
37	2317	99.7	419	2 AAR33760	AAr33760 Protein C
38	2317	99.7	419	5 AAU99047	AAu99047 Human pro
39	2317	99.7	419	5 AAU99069	AAu99069 Human pro
40	2317	99.7	419	5 AAU99036	AAu99036 Human pro
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42	2317	99.7	419	5 AAU99043	AAu99043 Human pro
43	2317	99.7	419	2 AAW25086	AAw25086 Human pro
44	2316	99.7	419	5 AAU99013	AAu99013 Human pro
45	2316	99.7	419	5 AAU99019	AAu99019 Human pro
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48	2316	99.7	419	5 AAU99016	AAu99016 Human pro
49	2316	99.7	419	5 AAU99051	AAu99051 Human pro
50	2316	99.7	419	5 AAU99095	AAu99095 Human pro
51	2315	99.6	419	4 AAB36898	ABa36898 Human pro
52	2315	99.6	419	5 AAU99008	AAu99008 Human pro
53	2315	99.6	419	5 AAU99049	AAu99049 Human pro
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56	2315	99.6	419	5 AAU99020	AAu99020 Human pro
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58	2315	99.6	419	5 AAU99071	AAu99071 Human pro
59	2315	99.6	419	5 AAU99014	AAu99014 Human pro
60	2315	99.6	419	5 AAU99045	AAu99045 Human pro
61	2315	99.6	419	5 AAU99052	AAu99052 Human pro
62	2315	99.6	419	5 AAU99034	AAu99034 Human pro
63	2315	99.6	419	5 AAU99066	AAu99066 Human pro
64	2314	99.6	419	4 AAB36897	ABa36897 Human pro
65	2314	99.6	419	5 AAU99005	AAu99005 Human pro
66	2314	99.6	419	5 AAU99012	AAu99012 Human pro
67	2314	99.6	419	5 AAU99019	AAu99019 Human pro
68	2314	99.6	419	5 AAU99076	AAu99076 Human pro
69	2314	99.6	419	5 AAU99097	AAu99097 Human pro
70	2314	99.6	419	5 AAU99009	AAu99009 Human pro
71	2314	99.6	419	5 AAU99022	AAu99022 Human pro
72	2314	99.6	419	5 AAU99070	AAu99070 Human pro
73	2314	99.6	419	5 AAU99081	AAu99081 Human pro
74	2314	99.6	419	5 AAU99055	AAu99055 Human pro
75	2314	99.6	419	5 AAU99017	AAu99017 Human pro
76	2314	99.6	419	5 AAU99024	AAu99024 Human pro
77	2314	99.6	419	5 AAU99053	AAu99053 Human pro
78	2314	99.6	419	5 AAU99059	AAu99059 Human pro
79	2314	99.6	419	5 AAU99048	AAu99048 Human pro
80	2314	99.6	419	5 AAU99003	AAu99003 Human pro
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82	2313	99.5	419	5 AAU99018	AAu99018 Human pro
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84	2313	99.5	419	5 AAU99063	AAu99063 Human pro
85	2313	99.5	419	5 AAU99083	AAu99083 Human pro
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87	2313	99.5	419	5 AAU99004	AAu99004 Human pro
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92	2313	99.5	419	5 AAU99060	AAu99060 Human pro
93	2313	99.5	419	5 AAU99056	AAu99056 Human pro
94	2313	99.5	419	5 AAU99085	AAu99085 Human pro
95	2313	99.5	419	5 AAU99044	AAu99044 Human pro
96	2313	99.5	419	5 AAU99054	AAu99054 Human pro
97	2313	99.5	419	5 AAU99065	AAu99065 Human pro
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99	2313	99.5	419	5	AU99028	Human Pro
100	2313	99.5	419	5	AU99011	Human Pro
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104	2312	99.5	419	5	AU99046	Human Pro
105	2312	99.5	419	5	AU99062	Human Pro
106	2312	99.5	419	5	AU99038	Human Pro
107	2312	99.5	419	5	AU99087	Human Pro
108	2312	99.5	419	5	AU99086	Human Pro
109	2312	99.5	419	5	AU99091	Human Pro
110	2312	99.5	419	5	AU99042	Human Pro
111	2311	99.4	419	5	AU99026	Human Pro
112	2311	99.4	419	5	AU99027	Human Pro
113	2311	99.4	419	5	AU99025	Human Pro
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115	2311	99.4	419	5	AU99077	Human Pro
116	2311	99.4	419	5	AU99092	Human Pro
117	2311	99.4	461	2	AAR62653	Human Pro
118	2310	99.4	419	5	AU99088	Human Pro
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120	2310	99.4	419	5	AU99080	Human Pro
121	2310	99.4	461	2	AAR13540	Human Pro
122	2309	99.4	419	5	AU99029	Human Pro
123	2309	99.4	419	5	AU99030	Human Pro
124	2309	99.4	419	5	AU99078	Human Pro
125	2309	99.4	419	5	AU99067	Human Pro
126	2308	99.3	419	5	AU99093	Human Pro
127	2308	99.3	419	5	AU99094	Human Pro
128	2308	99.3	419	5	AU99089	Human Pro
129	2307	99.3	419	5	AU99090	Human Pro
130	2306	99.2	419	5	AAR82675	Human Pro
131	2304.5	99.2	460	2	AAR13537	Human Pro
132	2302	99.1	419	4	AAR82676	Human Pro
133	2298	98.9	415	3	AAY68803	Truncated
134	2298	98.9	419	4	AAR82677	Human Pro
135	2296	98.8	419	4	AAR08629	Human Pro
136	2295.5	98.8	460	2	AAR13538	Human Pro
137	2294	98.7	419	4	AAR82678	Human Pro
138	2290	98.5	419	4	AAR08627	Human Pro
139	2288	98.5	419	4	AAR08630	Human Pro
140	2286	98.4	419	4	AAR08628	Human Pro
141	2281	98.1	410	7	ADC40012	Human act
142	2270	97.7	409	7	ADC40013	Human act
143	2257.5	97.1	460	2	AAR13623	Human Pro
144	2244	96.6	461	1	AAP93714	Hybrid pr
145	2210	95.1	419	2	AAR72753	Primary s
146	2085	89.7	509	2	AAR13083	Aar13083 PAP-1-pro
147	1972	84.9	356	2	AAY49558	Human pro
148	1409	60.6	262	2	AAR12196	Human pro
149	1407	60.5	262	2	AAR12193	Human pro
150	1406	60.5	262	2	AAR11838	Human pro

ALIGNMENTS

RESULT 1
AAR82673

ID AAR82673 standard; protein; 419 AA.

AC AAR82673;

DT 15-OCT-2001 (first entry)

DE Wild-type human protein C.

KW Protein C; human; coronary syndrome; thrombosis; angina;

KW myocardial infarction; vascular occlusive disorder; hypercoagulation;

KW sepsis; protein C deficiency; occlusion; thromboembolism; stenosis;

KW antibacterial; immunosuppressive; thrombolytic; cardiac; antianginal;

KW anticoagulant; therapy.

CS	Homo sapiens.	Location/Qualifiers
EH	Key	1..45
FT	Domain	/note= "Gla domain"
FT	Modified-site	6 /note= "gamma-carboxylated"
FT	Modified-site	7 /note= "gamma-carboxylated"
FT	Modified-site	12 /note= "gamma-carboxylated"
FT	Modified-site	14 /note= "O-phosphorylated"
FT	Modified-site	16 /note= "gamma-carboxylated"
FT	Modified-site	19 /note= "gamma-carboxylated"
FT	Modified-site	20 /note= "gamma-carboxylated"
FT	Modified-site	25 /note= "gamma-carboxylated"
FT	Modified-site	26 /note= "gamma-carboxylated"
FT	Modified-site	29 /note= "gamma-carboxylated"
FT	Disulfide-bond	50..69 /note= "N-glycosylated"
FT	Disulfide-bond	59..64
FT	Disulfide-bond	80..89
FT	Disulfide-bond	98..109
FT	Disulfide-bond	120..133
FT	Disulfide-bond	141..277
FT	Cleavage-site	156..157
FT	Cleavage-site	/note= "Cleavage makes a 2-chain inactive precursor (155-amino acid light chain attached via a disulfide bond to a 262-amino acid heavy chain)"
FT	Peptide	158..169
FT	Peptide	/note= "activation peptide; removal activates the 2-chain zymogen"
FT	Cleavage-site	169..170
FT	Cleavage-site	/note= "thrombin cleavage site"
FT	Disulfide-bond	248
FT	Modified-site	248 /note= "N-glycosylated"
FT	Modified-site	313 /note= "N-glycosylated"
FT	Modified-site	329 /note= "N-glycosylated"
FT	Disulfide-bond	331..345 /note= "N-glycosylated"
FT	Disulfide-bond	356..384
FN	WO200157193-A2.	
PD	09-AUG-2001.	
PF	19-JAN-2001; 2001WO-US000020.	
PR	02-FEB-2000; 2000US-0179801F.	
PR	14-MAR-2000; 2000US-0189197F.	
PA	(EHLI) LILLY & CO ELI.	
PI	Gerlitz BE, Jones BE,	
PI	WPI; 2001-496919/54.	
PI	N-PDB; AAR82673.	
PT	Novel human protein C derivative for treating, e.g., myocardial	
PT	infarction, unstable angina, sepsis, thrombotic disorders, acute arterial	
PT	thrombotic occlusion, and thromboembolism.	
PS	Claim 1, Page 49-50; 63pp; English.	
XX	The present sequence is that of human protein C mature polypeptide. The	

invention relates to human protein C derivatives having at least 2 amino acid substitutions, and to recombinant DNA molecules encoding such derivatives. These derivatives have increased anticoagulant activity and resistance to inactivation by serpins compared with wild-type human protein C but retain the biological activity of the wild-type protein. The amino acid substitutions are selected from H10Q, S11Q, S1K, Q32E, N33D, N33F, and amino acids at positions 194, 195, 228, 249, 254, 302, or 316 of the mature protein C polypeptide substituted with Ser, Ala, Thr, His, Lys, Leu, Arg, Asn, Asp, Glu, Gly, or Gln. Preferred protein C derivatives are given in AAB82675-78. Also claimed are a vector comprising DNA encoding the novel human protein C derivatives, transformed host cells and a method of producing the human protein C derivatives. The protein C derivatives are useful for treating coronary syndromes and disease states predisposing to thrombosis (e.g. myocardial infarction and unstable angina), vascular occlusive disorders and hypercoagulable states, sepsis (in combination with bactericidal permeability increasing protein or with tissue factor pathway inhibitor), thrombotic disorders (in combination with an anti-platelet agent or by local delivery through an intracoronary catheter), protein C deficiency, acute arterial thrombotic occlusion, thromboembolism, or stenosis in coronary, cerebral or peripheral arteries or in vascular grafts. Human patients with genetically predisposed prothrombotic disorders may be treated by gene therapy (all claimed).

Sequence 419 AA;

Query Match 100.0%; Score 2324; DB 4; Length 419;

Best Local Similarity 100.0%; Pred. No. 3e-143; Matches 419; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 ANSFLELRHSLSERECIEICDFEAKEIFQNVDDTLAFMSKHYDQCLVPLEHPCA 60
DB 1 ANSFLELRHSLSERECIEICDFEAKEIFQNVDDTLAFMSKHYDQCLVPLEHPCA 60
QY 61 SLCCGHTCTIDIGISFSCDCSGWGRFCQREVSPFNSLNDGGCTHYCLEBYGMRSC 120
DB 61 SLCCGHTCTIDIGISFSCDCSGWGRFCQREVSPFNSLNDGGCTHYCLEBYGMRSC 120
QY 121 APGYKGLDLDLQCHPAVKEPCGRPMKMKKSHLRDTEDEQVDFRLIDGKMTRRGD 180
DB 121 APGYKGLDLDLQCHPAVKEPCGRPMKMKKSHLRDTEDEQVDFRLIDGKMTRRGD 180
QY 181 SPQVVLIDSKKKLACGAVLHPSWVLTAAHCDSESKLLVRLGSDLRMRKWELEDDI 240
DB 181 SPQVVLIDSKKKLACGAVLHPSWVLTAAHCDSESKLLVRLGSDLRMRKWELEDDI 240
QY 241 KEVFHFNYSKSTTDNDIALHQAOPATLSQTIPICLPDSGLARELNQAQGETLVYGM 300
DB 241 KEVFHFNYSKSTTDNDIALHQAOPATLSQTIPICLPDSGLARELNQAQGETLVYGM 300
QY 301 GYHSREKAKRRTFVNFITKIPVPNHNCSEVMSNMVSENNLCAGILGRDQACBGDS 360
DB 301 GYHSREKAKRRTFVNFITKIPVPNHNCSEVMSNMVSENNLCAGILGRDQACBGDS 360
QY 361 GGPVVASFHGTWFLVGLVSWGCGGLAHNGVYTKVSRVLDWIHGHTRDKEAPQKSNAP 419
DB 361 GGPVVASFHGTWFLVGLVSWGCGGLAHNGVYTKVSRVLDWIHGHTRDKEAPQKSNAP 419

RESULT 2
AAB36894
ID AAB36894 standard; protein; 419 AA.

XX AAB36894;

XX 26-FEB-2001 (first entry)

XX Human protein C derivative 1.

XX Protein C; human; vascular occlusive; burn; transplantation;
XX deep vein thrombosis; sickle cell; thalassemia; thrombotic disorders;
XX myocardial infarction; angina; stroke.

OS Homo sapiens.
XX WC020006754-A1.
XX 09-NOV-2000.
XX 13-APR-2000; 2000WC-US008722.
XX 30-APR-1999; 99US-0131801P.
XX (BLI) LILLY & CO ELL.
XX Gerlitz BE; Jones BE;
XX WPI; 2001-007227/01.
XX N-PSDB; AAC8311.
XX The present invention relates to a human protein C derivative. The protein is useful for treating vascular occlusive disorders, hypercoagulable states such as sepsis, disseminated intravascular coagulation, purpura fulminans, major trauma, major surgery, burns, adult respiratory distress syndrome, transplantation, deep vein thrombosis, heparin-induced thrombocytopenia, sickle cell disease, thalassemia, viral hemorrhagic fever, thrombotic thrombocytopenic purpura, and hemolytic uremic syndrome, and also useful for treating thrombotic disorders and acute coronary syndromes such as myocardial infarction, unstable angina, and stroke. Protein C derivatives with amino acid substitutions result in increased resistance to inactivation by serpins when compared to wild-type activated human protein C. They also have longer half-lives in human blood and hence require either less frequent administration and/or smaller dosage than wild type human protein C for treating disorders

Sequence 419 AA;

Query Match 100.0%; Score 2324; DB 4; Length 419;

Best Local Similarity 100.0%; Pred. No. 3e-143; Matches 419; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 ANSFLELRHSLSERECIEICDFEAKEIFQNVDDTLAFMSKHYDQCLVPLEHPCA 60
DB 1 ANSFLELRHSLSERECIEICDFEAKEIFQNVDDTLAFMSKHYDQCLVPLEHPCA 60
QY 61 SLCCGHTCTIDIGISFSCDCSGWGRFCQREVSPFNSLNDGGCTHYCLEBYGMRSC 120
DB 61 SLCCGHTCTIDIGISFSCDCSGWGRFCQREVSPFNSLNDGGCTHYCLEBYGMRSC 120
QY 121 APGYKGLDLDLQCHPAVKEPCGRPMKMKKSHLRDTEDEQVDFRLIDGKMTRRGD 180
DB 121 APGYKGLDLDLQCHPAVKEPCGRPMKMKKSHLRDTEDEQVDFRLIDGKMTRRGD 180
QY 181 SPQVVLIDSKKKLACGAVLHPSWVLTAAHCDSESKLLVRLGSDLRMRKWELEDDI 240
DB 181 SPQVVLIDSKKKLACGAVLHPSWVLTAAHCDSESKLLVRLGSDLRMRKWELEDDI 240
QY 241 KEVFHFNYSKSTTDNDIALHQAOPATLSQTIPICLPDSGLARELNQAQGETLVYGM 300
DB 241 KEVFHFNYSKSTTDNDIALHQAOPATLSQTIPICLPDSGLARELNQAQGETLVYGM 300
QY 301 GYHSREKAKRRTFVNFITKIPVPNHNCSEVMSNMVSENNLCAGILGRDQACBGDS 360
DB 301 GYHSREKAKRRTFVNFITKIPVPNHNCSEVMSNMVSENNLCAGILGRDQACBGDS 360
QY 361 GGPVVASFHGTWFLVGLVSWGCGGLAHNGVYTKVSRVLDWIHGHTRDKEAPQKSNAP 419
DB 361 GGPVVASFHGTWFLVGLVSWGCGGLAHNGVYTKVSRVLDWIHGHTRDKEAPQKSNAP 419

RESULT 3

AAE08625 standard; protein; 419 AA.

AAE08625;

01-NOV-2001 (first entry)

Human mature wild type protein C.

Human; protein C derivative; anticoagulation activity; thrombosis; sepsin inactivation; acute coronary syndrome; myocardial infarction; vascular occlusive disorder; hypercoagulable state; angina; sepsis; disseminated intravascular coagulation; DIC; burn; transplantation; sickle cell disease; viral haemorrhagic fever; protein C deficiency; haemolytic uremic syndrome; acute arterial thrombotic occlusion; thromboembolism; prothrombotic disorder; gene therapy; thalassemia.

Homo sapiens.

MO200159084-A1.

16-AUG-2001.

02-FEB-2001; 2001WO-US001221.

11-FEB-2000; 2000US-0181948P.

14-MAR-2000; 2000US-0189199P.

(EHL) LILLY & CO ELL.

Gerlitz BE, Grinnell EM, Jones BE;

WPI; 2001-514662/56.

N-PSDB; AAD15223.

Protein C derivative for treating acute coronary syndromes, vascular occlusive disorders, thrombotic disorders and sepsis, comprises substitutions at specified amino acid positions.

Claim 1; Page 43-44; 59pp; English.

The invention relates to human protein C derivatives and nucleic acid molecules encoding such derivatives. These derivatives have increased anticoagulation activity, resistance to sepsin inactivation and increased sensitivity to thrombin activation compared to wild type protein C, and retain the biological activity of the wild type human protein C. Protein C derivatives are useful in the manufacture of a medicament for the treatment of acute coronary syndromes e.g. myocardial infarction and unstable angina; and disease states predisposing to thrombosis; vascular occlusive disorders and hypercoagulable states e.g. disseminated intravascular coagulation (DIC), burns, transplantations, thalassemia, sickle cell disease, viral haemorrhagic fever and haemolytic uremic syndrome; sepsis in combination with bacterial permeability increasing protein; thrombotic disorders in combination with an anti-platelet agent; protein C deficiency; acute arterial thrombotic occlusion, CC thromboembolism or stenosis in coronary, cerebral or peripheral arteries CC or in vascular grafts in combination with a thrombolytic agent. Nucleic acid molecules of the invention are useful for treating humans with genetically predisposed prothrombotic disorders by gene therapy. The present sequence is human mature wild type protein C

Sequence 419 AA;

Query Match

Best Local Similarity 100.0%; Score 2324; DB 4; Length 419;

Matches 419; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

1 ANSPLEIARSSLEECIEICDPEAKKIPQNDVTLAPSKRVDSQCIVLPLEPCA 60
1 ANSPLEIARSSLEECIEICDPEAKKIPQNDVTLAPSKRVDSQCIVLPLEPCA 60
61 SLCCGCTCIDIGSGFCDSGRSGRFGQREVSTPLNCSLDNGGCTHYCLEBVGMRKCS 120

|||||
61 SLCCGCTCIDIGSGFCDSGRSGRFGQREVSTPLNCSLDNGGCTHYCLEBVGMRKCS 120

121 APGKLGDDLLQCHPAYKPCGHPKWKREKRSILKRDTEDEDQVYPRLLIDKMTRRGD 180

121 APGKLGDDLLQCHPAYKPCGHPKWKREKRSILKRDTEDEDQVYPRLLIDKMTRRGD 180

181 SPWQVVLDSKKKLAGAVLIHPSWLTFAHQWDESKLIVLGEYDLREWEKELDLDI 240

181 SPWQVVLDSKKKLAGAVLIHPSWLTFAHQWDESKLIVLGEYDLREWEKELDLDI 240

241 KEVFAHNYKSTTDNDIALHLAPATLSQTIPTCLPDSGLARBLINQAGETTVTGM 300

241 KEVFAHNYKSTTDNDIALHLAPATLSQTIPTCLPDSGLARBLINQAGETTVTGM 300

301 GHSSSEKAKRNRTFTYNIKTPVPHNECSRYMSNMYSENNLCAGLGRODAGCGDS 360

301 GHSSSEKAKRNRTFTYNIKTPVPHNECSRYMSNMYSENNLCAGLGRODAGCGDS 360

361 GGPWVASFPGTWFTLVGWSGEGCLHNYGVYTKVSRYLDTWIGHIRDKKAPQKSWAP 419

361 GGPWVASFPGTWFTLVGWSGEGCLHNYGVYTKVSRYLDTWIGHIRDKKAPQKSWAP 419

AAU99002 standard; protein; 419 AA.

AAU99002;

23-AUG-2002 (first entry)

Human Protein C zymogen protein.

Human Protein C zymogen protein.

Human; Protein C; N-glycosylation; APC; activated protein C; zymogen; serum half-life; chromosome 2q13-q14; stroke; myocardial infarction; after venous thrombosis; disseminated intravascular coagulation; DIC; sepsis; septic shock; embolism; pulmonary embolism; burn; pregnancy; bone marrow transplantation; major surgery; trauma; ARDS; coagulant; adult respiratory distress syndrome; alpha-1 antitrypsin.

Homo sapiens.

Key Location/Qualifiers

Protein 1..155

Peptide /label= Light_chain

Protein /label= Lys_Arg_dipeptide

Peptide /label= Heavy_chain

Peptide /label= Activation_peptide

MO200232461-A2.

25-APR-2002.

15-OCT-2001; 2001WO-DK00679.

18-OCT-2000; 2000DK-00001560.

18-OCT-2000; 2000US-0242268P.

21-JUN-2001; 2001DK-00000970.

21-JUN-2001; 2001US-0300154P.

(MAXY-) MAXYGEN APS.

(MAXY-) MAXYGEN HOLDINGS LTD.

Andersen KV, Pedersen AH, Friesgaard PO.

WPI; 2002-489875/52.

N-PSDB; ABR6039.

Novel conjugate useful for treating or preventing septic shock, stroke

PT and myocardial infarction, comprises non-polypeptide group covalently
 PT attached to protein C polypeptide comprising an attachment group.

PS Claim 2: Page 79-81; 92pp; English.

XX The invention relates to a conjugate (I) comprising at least one non-
 CC polypeptide moiety (II) (e.g. an N-glycosyl group) covalently attached to
 CC a protein C polypeptide comprising an amino acid sequence which differs
 CC from that of a parent protein C polypeptide (III) in at least one
 CC introduced and/or at least one removed amino acid residue comprising an
 CC attachment group for the non-polypeptide group (e.g. an N-glycosylation
 CC site). Also included are (1) a variant (IV) of (III) comprising a
 CC substitution in a position (P) where (P) is an amino acid with at least
 CC 25% of its side group exposed to the surface, with the proviso that the
 CC substitution is not Thr24Ser/Ala/His/Lys/Arg/Asn/Asp/Glu/Gly/Gln/
 CC Tyr30Ser/Ala/Thr/His/Lys/Arg/Asn/Asp/Glu/Gly/Gln or Phe31Ser/Ala/Thr/
 CC His/Lys/Arg/Asn/Asp/Glu/Gly/Gln; (2) a nucleotide sequence (V) encoding
 CC (IV); (3) an expression vector (VI) comprising (V); (4) a host cell (VII)
 CC comprising (V) or (VI); (5) increasing (M2) the functional in vivo half-
 CC life or the serum half-life of a parent protein C polypeptide. The
 CC conjugates, variants and protein C proteins are useful as medicaments,
 CC and in the manufacture of medicaments for the treatment (and
 CC diagnosis/prevention) of stroke, myocardial infarction, after venous
 CC thrombosis, disseminated intravascular coagulation (DIC), sepsis, septic
 CC shock, emboli e.g. pulmonary emboli, transplantation such as bone marrow
 CC transplantation, burns, pregnancy, major surgery/trauma or adult
 CC respiratory distress syndrome (ARDS). The variant protein C has an
 CC increased resistance to activation by e.g. human plasma and alpha-1
 CC antitrypsin. The conjugates have an increased in vivo half-life,
 CC increased serum half-life, increased resistance to inhibitors, reduced
 CC renal clearance, reduced immunogenicity and/or increased bioavailability.
 CC The conjugate offers a number of advantages over the currently available
 CC APC products, including longer duration between injections,
 CC administration of less protein, and fewer side effects. Moreover, a
 CC reduced anticoagulant activity is beneficial to reduce the risk of
 CC bleeding while maintaining the antiinflammatory activity of APC
 CC (activated protein C) conjugates. This must be especially important when
 CC the conjugate has an extended plasma life. The gene for protein C is
 CC located on chromosome 2q13-q14. The present sequence represents zymogen
 CC protein C upon which the variants of the invention were based

XX Sequence 419 AA;

Query Match 100.0%; Score 2324; DB 5; Length 419;

Best Local Similarity 100.0%; Pred. No. 3e-143;

Matches 419; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 ANSFLELRHSSLERECIEEICDFEAKELFQWVDTLAFMSKRVDDQCLVPLHPCA 60
 DB 1 ANSFLELRHSSLERECIEEICDFEAKELFQWVDTLAFMSKRVDDQCLVPLHPCA 60
 QY 61 SLCGCHGTCDIGISFCDCRSWGGRFCQREVSFLNCSLDNGGCTHYCLEBWGRRCSC 120
 DB 61 SLCGCHGTCDIGISFCDCRSWGGRFCQREVSFLNCSLDNGGCTHYCLEBWGRRCSC 120
 QY 121 AGGYLADDLQCHPAKPCGRPMKMEKRSKSLKPTDEQDQVDFPLIDGKTRRGD 180
 DB 121 AGGYLADDLQCHPAKPCGRPMKMEKRSKSLKPTDEQDQVDFPLIDGKTRRGD 180
 QY 181 SPQVTVLLDSKKKLAGAVLHPSPVLTAAHCDSESKKLVRLAEYDLRWKEMWELDDI 240
 DB 181 SPQVTVLLDSKKKLAGAVLHPSPVLTAAHCDSESKKLVRLAEYDLRWKEMWELDDI 240
 QY 241 KEVFAHPVYSKTTNDIDIALHQAQPTLSQTVPLCLPDSGLERLNQAQGETLVYWG 300
 DB 241 KEVFAHPVYSKTTNDIDIALHQAQPTLSQTVPLCLPDSGLERLNQAQGETLVYWG 300
 QY 301 GYHSSREKAEKNTFLVNFIKIPVPHNECSFWSNMVSENNLCAGILDRQDACSIDS 360
 DB 301 GYHSSREKAEKNTFLVNFIKIPVPHNECSFWSNMVSENNLCAGILDRQDACSIDS 360
 QY 361 GGPWVASFHGTWFLVGVSWGGGGLLHNYGVYTKVSRIDMTHIGHIRDKKAPQKSNAP 419

DB 361 GGPWVASFHGTWFLVGVSWGGGGLLHNYGVYTKVSRIDMTHIGHIRDKKAPQKSNAP 419

RESULT 5

ABR55547

ID ABR55547 standard; protein; 419 AA.

AC ABR55547;

DT 11-AUG-2003 (first entry)

DE Amino acid sequence of mature human protein C (PC).

XX Protein C: coagulation; thrombin; fibrinopeptide A; serine protease;
 XX antithrombotic; antiinflammatory; antiapoptotic; profibrinolytic;
 XX hypercoagulative disease; thrombosis; myocardial infarction;
 XX pulmonary embolism; reocclusion; angioplasty; thrombomodulin.

OS Homo sapiens.

Key Location/Qualifiers

FT Region 1..157

FT Active-site /note="light chain"

FT Region 158..169

FT Region 170..419

FT /note="heavy chain"

PN FR2831170-A1.

PD 25-APR-2003.

PF 19-OCT-2001; 2001FR-00013492.

PR 19-OCT-2001; 2001FR-00013492.

XX (INRM) INSERM INST NAT SANTE & RECH MEDICALE.

XX Le Bonniec B, Marque BE, Louvain V, Calmel C, Bianchini E;

XX Aitach M;

XX WPI; 2003-451127/43.

XX New chimeric protein, cleavable by thrombin, useful e.g. as

XX antithrombotic agents, particularly modified protein C containing

XX artificial activation sequence.

XX Disclosure; Fig 1; 51pp; French.

XX The present sequence represents the mature form of human protein C. This
 CC protein is an essential factor in the regulation of coagulation. The
 CC specification describes a chimeric protein, based on protein C, which
 CC comprises a thrombin-cleavable artificial sequence. This artificial
 CC sequence is of a formula given in the specification, and comprises a
 CC peptide from fibrinopeptide A, and a thrombin-cleavage site, other than
 CC that of the alpha-chain of fibrinogen. The chimeric protein with
 CC protease derivatives obtained by cleaving the chimeric protein with
 CC thrombin, are useful as antithrombotic, antiinflammatory, antiapoptotic
 CC and profibrinolytic agents, for treatment or prevention of
 CC hypercoagulative diseases, e.g. venous and arterial thrombosis;
 CC myocardial infarction; pulmonary embolism; reocclusion after angioplasty
 CC and alterations in the genes for protein C and thrombomodulin

XX Sequence 419 AA;

Query Match 100.0%; Score 2324; DB 6; Length 419;

Best Local Similarity 100.0%; Pred. No. 3e-143;

Matches 419; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 ANSFLELRHSSLERECIEEICDFEAKELFQWVDTLAFMSKRVDDQCLVPLHPCA 60
 DB 1 ANSFLELRHSSLERECIEEICDFEAKELFQWVDTLAFMSKRVDDQCLVPLHPCA 60
 QY 61 SLCGCHGTCDIGISFCDCRSWGGRFCQREVSFLNCSLDNGGCTHYCLEBWGRRCSC 120

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Db      61 SLCCGHTCIDIGISFSCDGRSGWGRFCQREVSFNGCLDNGGCTHCLEEVGMRSC 120
QY      121 APGYKLGDDLQCHPAKPCGGRPWMEKERSHLKRDTEDEQVDVPRLLDGKTRRGD 180
Db      121 APGYKLGDDLQCHPAKPCGGRPWMEKERSHLKRDTEDEQVDVPRLLDGKTRRGD 180
QY      181 SPWQVVLDSKKKACGAVLIHPSVLTAAHQDESKLLVRLGEYDLRREKWEIJDLDI 240
Db      181 SPWQVVLDSKKKACGAVLIHPSVLTAAHQDESKLLVRLGEYDLRREKWEIJDLDI 240
QY      241 KEVFNPNYSKSTTDNDIALHLAOPATLSQTIYPICLPDPSGLARELNQAGQETLVGM 300
Db      241 KEVFNPNYSKSTTDNDIALHLAOPATLSQTIYPICLPDPSGLARELNQAGQETLVGM 300
QY      301 GYHSREKAKRNRTFVLPFIKIPVPNECSEVMSNMVSENNLCAGILGDRDACEGDS 360
Db      301 GYHSREKAKRNRTFVLPFIKIPVPNECSEVMSNMVSENNLCAGILGDRDACEGDS 360
QY      361 GGPWVASFHGTWFLVGLVSWGEGCGLLHNYGYTKVSRYLDMHGHIDKXAPQKSNAP 419
Db      361 GGPWVASFHGTWFLVGLVSWGEGCGLLHNYGYTKVSRYLDMHGHIDKXAPQKSNAP 419

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RESULT 6
ADCA0014
ID ADCA0014 standard; protein; 419 AA.

AC ADCA0014;
XX
DT 18-DEC-2003 (first entry)
XX

DE Human activated protein C-related protein #3.

KW human; activated protein C; APC; thrombotic disorder;
KW intravascular coagulation; thrombotic stroke; deep vein thrombosis;
KW pulmonary embolism; peripheral arterial thrombosis;
KW acute myocardial infarction; retina thrombosis.

OS Homo sapiens.

XX MO2003075634-A2.

XX 18-SEP-2003.

PF 27-FEB-2003; 2003MO-US005046.

XX 08-MAR-2002; 2002US-0363364P.

XX (ELIL) LILLY & CO ELI.

PI Gopalratham G, Huang L, Riggin RM, Sheliga TX;

XX WPI; 2003-722308/68.

PT Pharmaceutical composition comprising activated protein C and a chelating
PT agent useful for treating thrombotic disorders such as stroke, deep vein
PT thrombosis, pulmonary embolism and myocardial infarction.

XX Disclosure; SEQ ID NO 3; 29pp; English.

CC The invention comprises a pharmaceutical composition containing activated
CC protein C (APC), a chelating agent and optionally a diluent. The
CC composition of the invention is useful for treating thrombotic disorders,
CC such as: intravascular coagulation, thrombotic stroke, deep vein
CC thrombosis, pulmonary embolism, peripheral arterial thrombosis, acute
CC myocardial infarction and retina thrombosis. The present amino acid
CC sequence represents a human protein that was used in the exemplification
CC of the invention.

XX Sequence 419 AA;

Query Match 100.0%; Score 2324; DB 7; Length 419;

Best Local Similarity 100.0%; Pred. No. 3e-143;
Matches 419; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

```

QY      1 ANSFLEIRHSSLERECIEIEICDFEAEVIFQNYDITLAFMSKVHVDQCLVPLEHPCA 60
Db      1 ANSFLEIRHSSLERECIEIEICDFEAEVIFQNYDITLAFMSKVHVDQCLVPLEHPCA 60
QY      61 SLCCGHTCIDIGISFSCDGRSGWGRFCQREVSFNGCLDNGGCTHCLEEVGMRSC 120
Db      61 SLCCGHTCIDIGISFSCDGRSGWGRFCQREVSFNGCLDNGGCTHCLEEVGMRSC 120
QY      121 APGYKLGDDLQCHPAKPCGGRPWMEKERSHLKRDTEDEQVDVPRLLDGKTRRGD 180
Db      121 APGYKLGDDLQCHPAKPCGGRPWMEKERSHLKRDTEDEQVDVPRLLDGKTRRGD 180
QY      181 SPWQVVLDSKKKACGAVLIHPSVLTAAHQDESKLLVRLGEYDLRREKWEIJDLDI 240
Db      181 SPWQVVLDSKKKACGAVLIHPSVLTAAHQDESKLLVRLGEYDLRREKWEIJDLDI 240
QY      241 KEVFNPNYSKSTTDNDIALHLAOPATLSQTIYPICLPDPSGLARELNQAGQETLVGM 300
Db      241 KEVFNPNYSKSTTDNDIALHLAOPATLSQTIYPICLPDPSGLARELNQAGQETLVGM 300
QY      301 GYHSREKAKRNRTFVLPFIKIPVPNECSEVMSNMVSENNLCAGILGDRDACEGDS 360
Db      301 GYHSREKAKRNRTFVLPFIKIPVPNECSEVMSNMVSENNLCAGILGDRDACEGDS 360
QY      361 GGPWVASFHGTWFLVGLVSWGEGCGLLHNYGYTKVSRYLDMHGHIDKXAPQKSNAP 419
Db      361 GGPWVASFHGTWFLVGLVSWGEGCGLLHNYGYTKVSRYLDMHGHIDKXAPQKSNAP 419

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RESULT 7
AAP81104
ID AAP81104 standard; protein; 460 AA.

XX AAP81104;

AC AAP81104; (revised)

DT 25-MAR-2003 (first entry)

XX 16-SEP-1990 (first entry)

DE Sequence of human protein C.

XX Human protein C; plasmaid pPC 1.

XX Homo sapiens.

XX JP63263083-A.

XX 31-OCT-1988.

PF 21-APR-1987; 87JP-00096341.

XX 21-APR-1987; 87JP-00096341.

XX (FARH) HOECHST JAPAN LTD.

XX WPI; 1988-350711/49.

XX N-PSDB; AAN81408.

XX Human protein C gene - prepd. from new DNA having specified base

XX sequence.

XX Disclosure; Page 7; 16pp; Japanese.

CC The human protein C is expressed in large ants. using plasmaid pPC 1 in

CC E.coli K12/om 225 (FERM P-9297). (Updated on 25-MAR-2003 to correct PD

CC field.) (Updated on 25-MAR-2003 to correct PA field.)

XX Sequence 460 AA;

Query Match 100.0%; Score 2324; DB 1; Length 460;
Best Local Similarity 100.0%; Pred. No. 3.3e-143;

Matches 419; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 ANSFLEELRHSLSRECEIEICDFEAKETIQVNDVDTLAFMSKRVGDQCLVPLEHPCA 60

Db 42 ANSFLEELRHSLSRECEIEICDFEAKETIQVNDVDTLAFMSKRVGDQCLVPLEHPCA 101

QY 61 SLCCGHTCTCIDIGSFSCDCRSWGRFCQREVSLFNCSLDNGGCTHYCLBEVGNRRCSG 120

Db 102 SLCCGHTCTCIDIGSFSCDCRSWGRFCQREVSLFNCSLDNGGCTHYCLBEVGNRRCSG 161

QY 121 APGYKLGDDLLQCHPAVYFPCGRPWKMEKRSKLRDTEDEQDQVDPRLIDGKMTREGD 180

Db 162 APGYKLGDDLLQCHPAVYFPCGRPWKMEKRSKLRDTEDEQDQVDPRLIDGKMTREGD 221

QY 181 SPWQVYLLDSKKKLAGAVLIHPSWVLTAAHOMDSKKLVRLGEYDLRRMEKELDDI 240

Db 222 SPWQVYLLDSKKKLAGAVLIHPSWVLTAAHOMDSKKLVRLGEYDLRRMEKELDDI 281

QY 241 KEVFNHNSKSTTNDIALHLAOPATLSQTIYVICLPDGLARELNQAQETLYTGM 300

Db 282 KEVFNHNSKSTTNDIALHLAOPATLSQTIYVICLPDGLARELNQAQETLYTGM 341

QY 301 GYHSSREKAKENRTFVNFIKIPVPHNECSSEVMNVSNNLCAGILGRDQACEGDS 360

Db 342 GYHSSREKAKENRTFVNFIKIPVPHNECSSEVMNVSNNLCAGILGRDQACEGDS 401

QY 361 GGPWVASFHGTWFLVGLVSWGEGGLHNHYGYTKVSRYLDTIHGIRDKKAPQKSWAP 419

Db 402 GGPWVASFHGTWFLVGLVSWGEGGLHNHYGYTKVSRYLDTIHGIRDKKAPQKSWAP 460

RESULT 8

AAP60001 standard; protein, 461 AA.

XX AAP60001;

AC 25-MAR-2003 (revised)

DT 25-JUL-1991 (first entry)

XX

DE Sequence of polypeptide with human protein C activity.

XX Vascular disorder therapy; protein C deficiency.

XX Homo sapiens.

OS

XX

XX Key

FT Region 1..32

FT Protein /note= "encoded by AAP60004"

FT 33..461

FT /note= "encoded by AAP60001"

XX

XX EPI91606-A.

XX

XX 20-AUG-1986.

XX

XX 06-FEB-1986; 86EP-00300823.

XX

XX 08-FEB-1985; 85US-00699967.

XX

XX (BLIT) LILLY & CO ELI.

XX

XX Bary NU, Beckmann RJ, Jaskunas SR, Lai MH, Little SP, Long GL, Senterre RF;

PI

XX WPI; 1986-220077/34.

DR

XX

XX Prod. of polypeptide having human protein C activity - is by recombinant

PT DNA procedures for prod. useful against vascular disorders.

XX

XX Disclosure; Page 10-12; 121pp; English.

XX

CC The claimed sequence AAP60001 has "RIN-RM" attached to its 5' end

CC where: R= AAP60002 or AAP60003, and R1= AAP60004 or AAP60005; and M and

CC N= 0 or 1; provided that when M=0, N=0; and that when R= AAP60002, R1=

CC AAP60004; and that when R= AAP60003, R1= AAP60005. (Updated on 25-MAR-

CC 2003 to correct PA field.)

SQ Sequence 461 AA;

Query Match 100.0%; Score 2324; DB 1; Length 461;

Best local similarity 100.0%; Pred. No. 3..3e-143;

Matches 419; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 ANSFLEELRHSLSRECEIEICDFEAKETIQVNDVDTLAFMSKRVGDQCLVPLEHPCA 60

Db 42 ANSFLEELRHSLSRECEIEICDFEAKETIQVNDVDTLAFMSKRVGDQCLVPLEHPCA 102

QY 61 SLCCGHTCTCIDIGSFSCDCRSWGRFCQREVSLFNCSLDNGGCTHYCLBEVGNRRCSG 120

Db 103 SLCCGHTCTCIDIGSFSCDCRSWGRFCQREVSLFNCSLDNGGCTHYCLBEVGNRRCSG 162

QY 121 APGYKLGDDLLQCHPAVYFPCGRPWKMEKRSKLRDTEDEQDQVDPRLIDGKMTREGD 180

Db 163 APGYKLGDDLLQCHPAVYFPCGRPWKMEKRSKLRDTEDEQDQVDPRLIDGKMTREGD 222

QY 181 SPWQVYLLDSKKKLAGAVLIHPSWVLTAAHOMDSKKLVRLGEYDLRRMEKELDDI 240

Db 223 SPWQVYLLDSKKKLAGAVLIHPSWVLTAAHOMDSKKLVRLGEYDLRRMEKELDDI 282

QY 241 KEVFNHNSKSTTNDIALHLAOPATLSQTIYVICLPDGLARELNQAQETLYTGM 300

Db 283 KEVFNHNSKSTTNDIALHLAOPATLSQTIYVICLPDGLARELNQAQETLYTGM 342

QY 301 GYHSSREKAKENRTFVNFIKIPVPHNECSSEVMNVSNNLCAGILGRDQACEGDS 360

Db 343 GYHSSREKAKENRTFVNFIKIPVPHNECSSEVMNVSNNLCAGILGRDQACEGDS 402

QY 361 GGPWVASFHGTWFLVGLVSWGEGGLHNHYGYTKVSRYLDTIHGIRDKKAPQKSWAP 419

Db 403 GGPWVASFHGTWFLVGLVSWGEGGLHNHYGYTKVSRYLDTIHGIRDKKAPQKSWAP 461

RESULT 9

AAP70855 standard; protein, 461 AA.

XX AAP70855;

AC 25-MAR-2003 (revised)

DT 10-MAY-1991 (first entry)

XX

DE Human Protein C.

XX

XX human Protein C; anti-coagulant; thrombosis; serine protease.

XX

XX Homo sapiens.

OS

XX

XX Key

FT Peptide 1..42

FT /label= prepro leader peptide

FT Disulfide-bond 59..64

FT Domain 60..63

FT

FT Domain

FT 92..175

FT /label= gamma-carboxyglutamic acid (Gla) domain

FT Disulfide-bond 92..111

FT Disulfide-bond 101..106

FT Disulfide-bond 105..120

FT Disulfide-bond 122..131

FT Modified-site 139

FT /label= N-glycosylation site

FT Disulfide-bond 140..151

FT Disulfide-bond 147..160

FT Disulfide-bond 162..175

FT Disulfide-bond 183..319

FT Cleavage-site /note="links together the two processed chains"
 FT 197..198 /note="apparent processing site for connecting dipeptide"
 FT Cleavage-site 199..200
 FT /note="apparent processing site for connecting dipeptide"
 FT Cleavage-site 211..212
 FT /note="in heavy chain; converts to activated protein C"
 FT Disulfide-bond 238..254
 FT Modified-site /label= N-glycosylation site
 FT Modified-site 355
 FT /label= N-glycosylation site
 FT Modified-site 371
 FT /label= N-glycosylation site
 FT Disulfide-bond 373..387
 FT Disulfide-bond 398..426
 XX EP215548-A.
 XX PD 25-MAR-1987.
 XX PF 26-JUN-1986; 86EP-00304970.
 XX PR 27-JUN-1985; 85US-00749600.
 XX PR 15-AUG-1985; 85US-00766109.
 XX PA (ZYMO) ZYMOGENETICS INC.
 XX PA (UNIM) UNIV WASHINGTON.
 XX PI Murray WJ, Berkner KL, Foster DC, Davie EW;
 XX PI WPI; 1987-081505/12.
 XX DR N-PSDS; AAN70102.
 XX PT Human protein C or activated protein C - prepd. using expression vector
 XX PT capable of integration in mammalian host cell DNA.
 XX PS Claim 4; Fig 4; 52pp; English.
 XX CC Recombinantly produced protein C can be used to treat thrombotic
 XX CC disorders such as venous thrombosis as it has anti-coagulant properties.
 XX CC The protein sequence is thought to yield two peptide chains; the first
 XX CC contains the Gla domain and growth factor domains and the second (the
 XX CC activation peptide) contains the catalytic domain. (Updated on 25-MAR-
 XX CC 2003 to correct PA field.)
 XX SQ Sequence 461 AA;
 XX
 XX Query Match 100.0%; Score 2324; DB 1; Length 461;
 XX Best Local Similarity 100.0%; Pred. No. 3.3e-143;
 XX Matches 419; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
 QY 1 ANSFEEELHSSIERECIEICDFEBAKEIFQNVDTLAFAWKGHVDGQCVIPLHPCA 60
 DB 43 ANSFEEELHSSIERECIEICDFEBAKEIFQNVDTLAFAWKGHVDGQCVIPLHPCA 102
 QY 61 SICCGGTCTGIGSPGCDRSGMGRFCOREVNFMCSDNGGCTHCLBEVGRRCSC 120
 DB 103 SICCGGTCTGIGSPGCDRSGMGRFCOREVNFMCSDNGGCTHCLBEVGRRCSC 162
 QY 121 APGYKLDLLQCHPAVFPGRPMKMEKKRSHLKRDTEDQDVDPRLIDGKMTRRGD 180
 DB 163 APGYKLDLLQCHPAVFPGRPMKMEKKRSHLKRDTEDQDVDPRLIDGKMTRRGD 222
 QY 181 SPQVVLDSKKKALACGAVLIHPSVLTAAHCOMESKLLVRLGSDYLRERKEKEDLDI 240
 DB 223 SPQVVLDSKKKALACGAVLIHPSVLTAAHCOMESKLLVRLGSDYLRERKEKEDLDI 282
 QY 241 KEVYVHPYNSKSTNDIALHLAOPATISQTIYPICLPDSGLAREELNAGQDETIVTGM 300
 DB 283 KEVYVHPYNSKSTNDIALHLAOPATISQTIYPICLPDSGLAREELNAGQDETIVTGM 342

QY 301 GHSSREKAKRRTFVNFILKIPVPHNCSFVSNMVMSENMICAGILGRDQACGDS 360
 DB 343 GHSSREKAKRRTFVNFILKIPVPHNCSFVSNMVMSENMICAGILGRDQACGDS 402
 QY 361 GGPVVASFHGTWPLVGVISMGEGCGLLANTGYTKVSRYLDMIGHIRDEAPQKSWAP 419
 DB 403 GGPVVASFHGTWPLVGVISMGEGCGLLANTGYTKVSRYLDMIGHIRDEAPQKSWAP 461
 XX
 XX RESULT 10
 XX AAP90401
 XX ID AAP90401 standard; protein; 461 AA.
 XX AC AAP90401;
 XX AC 25-MAR-2003 (revised)
 XX DT 01-NOV-1989 (first entry)
 XX XX
 XX DE Zymogen form of human protein C.
 XX XX
 XX KW Human protein C; zymogen form; activated C protein; human liver mRNA;
 XX KW signal peptide; propeptide; antithrombotic.
 XX OS Homo sapiens.
 XX XX
 XX PM EP323149-A.
 XX PD 05-JUL-1989.
 XX PF 22-DEC-1988; 88EP-00312201.
 XX PR 28-DEC-1987; 87US-00138009.
 XX PA (ELLU) LILLY & CO ELL.
 XX PI Bang NU, Ehrlich HJ, Grimmel BW, Yan SB;
 XX PI WPI; 1989-194452/27.
 XX DR N-PSDB; AAN90187.
 XX PT New DNA encoding zymogen form of human protein C - and its activated
 XX PT deriv.; useful as e.g. antithrombotic agents more sensitive to thrombin
 XX PT activation.
 XX PS Disclosure; Page 4 - 7; 65pp; English.
 XX XX
 XX CC This is the protein sequence of nascent human protein C encoded by the
 XX CC DNA of AAN90187, which is derived from cDNA clones prepd. from human
 XX CC liver mRNA. It comprises the following regions: residues 1-42 are the
 XX CC signal peptide and propeptide of human protein C; important for directing
 XX CC secretion and gamma-carboxylation of protein C; residues 43-197, once
 XX CC post-translationally modified, constitute the light chain of both the
 XX CC two-chain zymogen and activated forms of protein C; residues 198-9 are
 XX CC believed to be removed (on basis of homology with bovine protein C),
 XX CC probably by a 2 step process comprising a first cleavage (either between
 XX CC residues 197-8 or 199-200), followed by carboxypeptidase or
 XX CC aminopeptidase action, to form 2 chain protein C; residues 200-211
 XX CC constitute the activation peptide, which is removed from the zymogen
 XX CC forms to obtain activated protein C; residues 212-461, once post-
 XX CC translationally modified, constitute the activated heavy chain of active
 XX CC protein C; and the heavy chain of the 2 chain form of protein C zymogen,
 XX CC once post-translationally-modified, is composed of residues 200-461.
 XX CC Protein C zymogen and activated protein C are regulators of haemostasis,
 XX CC differing from native protein C by increased sensitivity to activation by
 XX CC thrombin and thrombin/thrombomodulin (even in presence of Ca ions) and
 XX CC longer in vivo half life. They are useful as on-demand antithrombotic
 XX CC agents, (replacements for heparin and hydroxycoumarins) and for treatment
 XX CC of hereditary protein C deficiency states. (Updated on 25-MAR-2003 to
 XX CC correct PA field.)
 XX SQ Sequence 461 AA;
 XX

RESULT 11
AAR13622
ID AAR13622 standard; protein; 461 AA

PI	Miyagi F, Sumi Y, Wakabayashi K, Foerster DC;
IX	MP1, 1991-267132/36.
DR	N-P5DB; AAQ13357.
XX	
XX	Activated human protein C with truncated light chain - used in therapy
FT	and prophylaxis to enhance anticoagulant and fibrinolytic capabilities.
PS	Claim 1; Fig 1, 49pp; English.
XX	
CC	The amino acid sequence codes for human protein C (HPC). The activated
CC	protein can comprise one of 3 different truncated light chains, Ala(1) to
CC	Lys(150), Lys(151) or Arg(152). The activated HPC with a truncated light
CC	chain is more stable during storage. It can be administered for
CC	prophylactic and/or therapeutic treatments of disease states or injuries
CC	to enhance the patient's own anti-coagulative or fibrinolytic
CC	capabilities. See also WO9109951 (AAR13074). [Updated on 25-MAR-2003 to
CC	correct PA field.]
SQ	Sequence 461 AA;
Query Match	100.0%; Score 2324; DB 2; Length 461;
Match Local Similarity	100.0%; Pred. No. 3-3e+143; Indels 0; Gaps 0;
Matches 419; Conservative 0; Mismatches 0;	
OY	1 ANSFLTELHSSLSRECEIEICDFEAKKIFQVNDCTLAFSKHVDGDCIYPLIEHPCA 60
Db	43 ANSFLELHSHSLRECEIEICDFEAKKIFQVNDCTLAFSKHVDGDCIYPLIEHPCA 102
OY	61 SLCCGGTCTDGTISFSCCRSGMEGRFCORBYSELCSDNGGCTHYCLEEVGMRRCSG 120
Db	103 SLCCGGTCTDGTISFSCCRSGMEGRFCOREVSELCSDNGGCTHYCLEEVGMRRCSG 162
OY	121 APKGKIGDDLQCHPAKPCRPCKPMKKMKSSHKKRDEPOEDDYDPRLIDGMTRRGD 180
Db	163 APKGKIGDDLQCHPAKPCRPCKRMKKMKSSHKKRDEPOEDDYDPRLIDGMTRRGD 222
OY	181 SPWQVVLDSKKKLACAVYLHRPSWVTLAAHCMDSSKKLYRGETDLARRKEKELDLDI 240
Db	223 SPWQVVLDSKKKLACAVYLHRPSWVTLAAHCMDSSKKLYRGETDLARRKEKELDLDI 282
OY	241 KEVVPNPNSKSTTDNDIALHLAQPTLSQTIVPICLPDSGLAEELNQAQGETLVWG 300
Db	283 KEVVPNPNSKSTTDNDIALHLAQPTLSQTIVPICLPDSGLAEELNQAQGETLVWG 342
OY	301 GYHSSEKKEAKRNTPVLANFIKIPVPHNECSFWSNVSENMLCGLIGDRDACGSOS 360
Db	343 GYHSSEKKEAKRNTPVLANFIKIPVPHNECSFWSNVSENMLCGLIGDRDACGSOS 402
OY	361 GGPVVASFGHWLFVGIVSGSGCGLLHNAGYTTKYVSRYTLMIGHIRDKEAPOKSWAP 419
Db	403 GGPVVASFGHWLFVGIVSGSGCGLLHNAGYTTKYVSRYTLMIGHIRDKEAPOKSWAP 461
RESULT 12	
AAR13081	ID AAR13081 standard; protein; 461 AA.
XX	AAR13081;
XX	
DT	25-MAR-2003 (revised)
DT	30-SEP-1991 (first entry)
XX	
DE	Human protein C.
XX	
KW	Phospholipid; binding protein; lipocortin; domain; vitamin K; PBP;
XX	gly-domain; VKDP.
XX	
OS	Homo sapiens.
FM	Key Location/Qualifiers
FT	Peptide 1..42
FT	/label= sig_peptide


```

FT Protein 43. .461
FT /label= mat_protein
XX MO9109953-A.
XX
XX 11-JUL-1991.
XX
XX 29-DEC-1989; 89US-00459082.
XX
XX 29-DEC-1989; 89US-00459082.
XX
XX (ZYMO ) ZYMOGENETICS INC.
XX
XX Foster DC;
XX
XX WPI; 1991-222905/30.
XX
XX N-PSDB; AAQ12678.
XX
XX Recombinant prodn. of hybrid phospholipid-binding proteins - comprising
XX lipocortin phospholipid-binding domain and vitamin-K-dependent protein.
XX
XX PS Disclosure; Fig 2; 57pp; English.
XX
XX This sequence, or a fragment of it, is used in the construction of hybrid
XX phospholipid-binding proteins (PBP) having the same biological activity
XX as human protein C or human activated protein C. The hybrid sequence
XX would comprise at least one lipocortin phospholipid binding domain (PBD),
XX e.g. of PAP-I, joined to a gla-domainless protein C or activated protein
XX C. See AAQ12680-81 for such examples. See also AAQ12678-81. (Updated on
XX 25-MAR-2003 to correct PA field.)
XX
XX SQ Sequence 461 AA;
XX
XX Query Match 100.0%; Score 2324; DB 2; Length 461;
XX Best Local Similarity 100.0%; Pred. No. 3.3e-143;
XX Matches 419; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
XX
XX QY 1 ANSTLEIHSLSRECEIIECEERAKXIRPNVDLTAWSKWDGQCLVPLEHPCA 60
XX 43 ANSLEIHSLSRECEIIECEERAKXIRPNVDLTAWSKWDGQCLVPLEHPCA 102
XX
XX QY 61 SLCCGHTCIDIGSFCDCRSQMEGRFCOREVSHLNCSDNGCTHYCLEEVGMRCSC 120
XX 103 SLCCGHTCIDIGSFCDCRSQMEGRFCQREVSHLNCSDNGCTHYCLEEVGMRCSC 162
XX
XX QY 121 APGYKIGDDILQCHPAVPCGRPRWKEKKSLSKQDTEQDQDQDRLIDGMTRRGG 180
XX 163 APGYKIGDDILQCHPAVPCGRPRWKEKKSLSKQDTEQDQDQDRLIDGMTRRGG 222
XX
XX QY 181 SPWQVVLDSKKKLCGAVLHPWVLTAAHGMDSKKLVRLGEYDLRWEKMLDLDI 240
XX 223 SPWQVVLDSKKKLCGAVLHPWVLTAAHGMDSKKLVRLGEYDLRWEKMLDLDI 282
XX
XX QY 241 KEVTHHNYSKSTTNDIALHLAOPATLSQITIVICLPDSGLAEELNQAQETIVTGK 300
XX 283 KEVTHHNYSKSTTNDIALHLAOPATLSQITIVICLPDSGLAEELNQAQETIVTGK 342
XX
XX QY 301 GYHSRREKEKRNRTFVNAFKIPVPHNCGEVSNNVSNMLCAGILIGRQDACEGDS 360
XX 343 GYHSRREKEKRNRTFVNAFKIPVPHNCGEVSNNVSNMLCAGILIGRQDACEGDS 402
XX
XX QY 361 GGPVVASFHGTWFLVGLVSWGCGGLHNYGVYTKNSRYLDLWHLGHTRKEAPQKSNAP 419
XX 403 GGPVVASFHGTWFLVGLVSWGCGGLHNYGVYTKNSRYLDLWHLGHTRKEAPQKSNAP 461
XX
XX Db
XX
XX RESULT 13
XX AARI3074
XX ID AARI3074 standard; protein; 461 AA.
XX
XX AC AARI3074;
XX
XX XX 25-MAR-2003 (revised)

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DT 02-OCT-1991 (first entry)
XX
XX DE Protein C precursor.
XX
XX KW Anticoagulant; fibrinolysis.
XX
XX OS Homo sapiens.
XX
XX Key
XX PE Peptide
XX
XX Region
XX
XX Domain
XX
XX Modified-site
XX 48 /label= Gla domain
XX
XX Modified-site
XX 49 /label= gamma carboxyglutamic acid
XX
XX Modified-site
XX 56 /label= gamma carboxyglutamic acid
XX
XX Modified-site
XX 58 /label= gamma carboxyglutamic acid
XX
XX Modified-site
XX 61 /label= gamma carboxyglutamic acid
XX
XX Modified-site
XX 62 /label= gamma carboxyglutamic acid
XX
XX Modified-site
XX 67 /label= gamma carboxyglutamic acid
XX
XX Modified-site
XX 68 /label= gamma carboxyglutamic acid
XX
XX Modified-site
XX 71 /label= gamma carboxyglutamic acid
XX
XX Modified-site
XX 139 /label= N-glycosylation site
XX
XX Cleavage-site
XX 197. .198 /label= N-glycosylation site
XX
XX Cleavage-site
XX 199. .200 /label= proteolytic cleavage
XX
XX Peptide
XX 201. .211 /label= activation peptide
XX
XX Region
XX 212. .461 /label= heavy chain
XX
XX Modified-site
XX 250 /label= N-glycosylation site
XX
XX Modified-site
XX 355 /label= N-glycosylation site
XX
XX Modified-site
XX 371 /label= N-glycosylation site
XX
XX
XX MO9109951-A.
XX
XX PN 11-JUL-1991.
XX
XX PD
XX
XX PF 22-DEC-1989; 89US-00456092.
XX
XX PR 22-DEC-1989; 89US-00456092.
XX
XX PA (ZYMO ) ZYMOGENETICS INC.
XX
XX PA (TEIJIN ) TEIJIN LTD.
XX
XX PI Foster DC, Holly RD, Suzuki M, Wakabayash K, Kumar AA;
XX
XX XX WPI; 1991-222903/30.
XX
XX DR N-PSDB; AAQ12649.
XX
XX
XX Recombinant protein C with truncated light chain - for use as an
XX anticoagulant.
XX
XX PS Disclosure; Fig 1; 60pp; English.
XX
XX CC The sequence was deduced from a clone isolated from a cDNA library prepd.
XX from mRNA from Hep G2 cells. It is a protein C precursor, including light

```

CC and heavy chains, which is cleaved to produce activated protein C (see
CC feature table). The DNA encoding the sequence can be manipulated by
CC genetic engineering techniques to express a protein comprising (when
CC activated) a heavy chain and a truncated light chain comprising residues
CC 1-149, 1-150, 1-151 or 1-152 of the natural sequence. The protein pref.
CC comprises the precursor of formula: Pre-pro-L-X-H Pre-pro = pre-pro
CC peptide of protein C with all/part replaced by the corresponding peptide
CC of either protein S, factors VII, IX or X, or prothombin; L = Lys 1-149,
CC 150, 151 or 152 of light chain; X = 3-10 Lys/Arg residues; and H = heavy
CC chain. Cells transformed with expression vectors contg. the modified DNA
CC sequences produce the new proteins which can be used to regulate
CC anticoagulant and fibrinolytic systems. See also W09112320 (AA113074).
CC (Updated on 25-MAR-2003 to correct PA field.)

CC Sequence 461 AA;

Query Match 100.0%; Score 2324; DB 2; Length 461;
Best Local Similarity 100.0%; Pred. No. 3.3e-143;
Matches 419; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 ANSFLEELRHSLERECIEICDFEAKETPQVNDTIAFMSKHVDGQCLVPLHPCA 60
DB 43 ANSFLEELRHSLERECIEICDFEAKETPQVNDTIAFMSKHVDGQCLVPLHPCA 102
QY 61 SLCCGHTCICDIGSFSCDCRSQWEGRFQOREVSLNCGCTHYCLEEVGMRCSC 120
DB 103 SLCCGHTCICDIGSFSCDCRSQWEGRFQOREVSLNCGCTHYCLEEVGMRCSC 162
QY 121 APGYKLGDDLLQCHPAVKEPCGRPMKMEKKSILKRDTEDEDDVDVPELIDGKMTREGD 180
DB 163 APGYKLGDDLLQCHPAVKEPCGRPMKMEKKSILKRDTEDEDDVDVPELIDGKMTREGD 222
QY 181 SPWQVVLDSKKKLAGAVLIHPSWVLTAAHOMDSKKLIVRGEYDLRRMEKWELEDL 240
DB 223 SPWQVVLDSKKKLAGAVLIHPSWVLTAAHOMDSKKLIVRGEYDLRRMEKWELEDL 282
QY 241 KEVFVHPNYSKSTTNDIALHLAOPATLSQTVPICLPDSGLARELNQAGQETLVYTGW 300
DB 283 KEVFVHPNYSKSTTNDIALHLAOPATLSQTVPICLPDSGLARELNQAGQETLVYTGW 342
QY 301 GHSSREKEAKNRTFTVNFIKIPVPHNECEVSNVSNMTCAGILGDRQDACEGDS 360
DB 343 GHSSREKEAKNRTFTVNFIKIPVPHNECEVSNVSNMTCAGILGDRQDACEGDS 402
QY 361 GGPVVASFHGTWFLVGLVSWGCGGLAHNYGYTTSRYLDMTHGIRIDKEAPQKSNAP 419
DB 403 GGPVVASFHGTWFLVGLVSWGCGGLAHNYGYTTSRYLDMTHGIRIDKEAPQKSNAP 461

RESULT 14
AAR34295
ID AAR34295 standard; protein; 461 AA.
AC AAR34295;
XX
DT 10-AUG-1993 (first entry)
XX
DE Protein C.
XX
KM Protein C; heavy chain; light chain; anticoagulating; fibrinolysis;
XX promoter; anticoagulant.
OS Homo sapiens.
XX
EH Key Location/Qualifiers
FT Peptide 193..197
FT /label= C-terminal
FT /note= "light chain"
FT Peptide 194..197
FT /label= C-terminal
FT /note= "light chain"
FT Peptide 200..211
FT /label= N-terminal

FT /note= "heavy chain"
FT Peptide 451..461
FT /label= C-terminal
FT /note= "heavy chain"
FT Peptide 458..461
FT /label= C-terminal
FT /note= "heavy chain"

JP05064588-A.

19-MAR-1993.

14-AUG-1991; 9LJP-00228687.

14-AUG-1991; 9LJP-00228687.

WPI; 1993-128866/16.

(TEIU) TEIUN LTD.

Human protein C and activated protein C with short H chains - useful as

anti-clotting agents and fibrinolysis promoters.

Disclosure; Fig 1; 8pp; Japanese.

A human protease C or an activated protein C has a H chain contg. one of
the residues 239-246 (= residues 450-457 in the sequence below) in the H
chain of natural activated protein C as the C-terminal, or has a L chain
contg. one of the residues 149-155 (= residues 141-155 in the sequence
below), pref. residues 149-155 (= residues 149-155 in the sequence below)
in the L chain of natural activated protein C as the C-terminal. The
human protein C or the activated protein C can be used as an anticoagulating
agent or a fibrinolysis promoter

Sequence 461 AA;

Query Match 100.0%; Score 2324; DB 2; Length 461;
Best Local Similarity 100.0%; Pred. No. 3.3e-143;
Matches 419; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 ANSFLEELRHSLERECIEICDFEAKETPQVNDTIAFMSKHVDGQCLVPLHPCA 60
DB 43 ANSFLEELRHSLERECIEICDFEAKETPQVNDTIAFMSKHVDGQCLVPLHPCA 102
QY 61 SLCCGHTCICDIGSFSCDCRSQWEGRFQOREVSLNCGCTHYCLEEVGMRCSC 120
DB 103 SLCCGHTCICDIGSFSCDCRSQWEGRFQOREVSLNCGCTHYCLEEVGMRCSC 162
QY 121 APGYKLGDDLLQCHPAVKEPCGRPMKMEKKSILKRDTEDEDDVDVPELIDGKMTREGD 180
DB 163 APGYKLGDDLLQCHPAVKEPCGRPMKMEKKSILKRDTEDEDDVDVPELIDGKMTREGD 222
QY 181 SPWQVVLDSKKKLAGAVLIHPSWVLTAAHOMDSKKLIVRGEYDLRRMEKWELEDL 240
DB 223 SPWQVVLDSKKKLAGAVLIHPSWVLTAAHOMDSKKLIVRGEYDLRRMEKWELEDL 282
QY 241 KEVFVHPNYSKSTTNDIALHLAOPATLSQTVPICLPDSGLARELNQAGQETLVYTGW 300
DB 283 KEVFVHPNYSKSTTNDIALHLAOPATLSQTVPICLPDSGLARELNQAGQETLVYTGW 342
QY 301 GHSSREKEAKNRTFTVNFIKIPVPHNECEVSNVSNMTCAGILGDRQDACEGDS 360
DB 343 GHSSREKEAKNRTFTVNFIKIPVPHNECEVSNVSNMTCAGILGDRQDACEGDS 402
QY 361 GGPVVASFHGTWFLVGLVSWGCGGLAHNYGYTTSRYLDMTHGIRIDKEAPQKSNAP 419
DB 403 GGPVVASFHGTWFLVGLVSWGCGGLAHNYGYTTSRYLDMTHGIRIDKEAPQKSNAP 461

RESULT 15

AAM02600
ID AAM02600 standard; protein; 461 AA.

XX

AC AAW02600;
 XX
 DT 25-MAR-2003 (revised)
 DT 05-NOV-1996 (first entry)
 XX
 XX Human protein C.
 DE
 XX
 XX Activated protein C; serine protease; thrombosis; thrombolytic;
 KM fibrinolytic; antithrombotic; blood clotting; therapy.
 XX
 OS Homo sapiens.
 XX
 FH Key
 FH Peptide
 FT /label= Pre-pro-peptide
 FT 43..461
 FT /label= Mat_protein
 FT 59..64
 FT /label= GLA_domain
 FT 92
 FT /note= "forms disulphide bond with Cys111"
 FT 101
 FT /note= "forms disulphide bond with Cys105"
 FT 105
 FT /note= "forms disulphide bond with Cys101"
 FT 106
 FT /note= "forms disulphide bond with Cys120"
 FT 111
 FT /note= "forms disulphide bond with Cys92"
 FT 120
 FT /note= "forms disulphide bond with Cys106"
 FT 122
 FT /note= "forms disulphide bond with Cys131"
 FT 131
 FT /note= "forms disulphide bond with Cys122"
 FT 138
 FT /label= N-glycosylation_site
 FT 140
 FT /note= "forms disulphide bond with Cys151"
 FT 147
 FT /note= "forms disulphide bond with Cys160"
 FT 151
 FT /note= "forms disulphide bond with Cys140"
 FT 160
 FT /note= "forms disulphide bond with Cys147"
 FT 162
 FT /note= "forms disulphide bond with Cys175"
 FT 175
 FT /note= "forms disulphide bond with Cys162"
 FT 183
 FT /note= "forms disulphide bond with Cys319"
 FT 196
 FT /note= "residue 196 is replaced by Lys, Arg or in
 constructs of the invention"
 FT 197..198
 FT /note= "Cleavage site for connecting dipeptide"
 FT 198..199
 FT /note= "residues 198-199 are replaced by Lys-Lys or Arg-
 Arg in constructs of the invention"
 FT 198..199
 FT /note= "Cleavage site between connecting dipeptide and
 activation peptide"
 FT 200..211
 FT /label= Activated_protein-C
 FT 200
 FT /note= "residue 200 is replaced by Ala, Ser, Thr or Gly
 in constructs of the invention"
 FT 211..212
 FT /note= "Cleavage site for activation peptide"
 FT 238
 FT /note= "forms disulphide bond with Cys254"
 FT 254
 FT /note= "forms disulphide bond with Cys238"

FT Modified-site 290
 FT /label= N-glycosylation_site
 FT 319
 FT /note= "forms disulphide bond with Cys183"
 FT 355
 FT /label= N-glycosylation_site
 FT 371
 FT /label= N-glycosylation_site
 FT 373
 FT /note= "forms disulphide bond with Cys387"
 FT 387
 FT /note= "forms disulphide bond with Cys373"
 FT 398
 FT /note= "forms disulphide bond with Cys426"
 FT 426
 FT /note= "forms disulphide bond with Cys 398"
 XX
 XX US5516650-A.
 XX
 XX 14-MAY-1996.
 XX
 XX 08-APR-1994; 94US-00225253.
 XX
 XX 27-JUN-1985; 85US-00749600.
 XX 29-OCT-1986; 86US-00924462.
 XX 08-DEC-1987; 87US-00130370.
 XX 28-FEB-1989; 89US-00317205.
 XX 10-SEP-1990; 90US-00582131.
 XX 04-DEC-1992; 92US-00987532.
 XX
 XX (ZIMO) ZYMOGENETICS INC.
 XX
 XX Murray MJ, Berkner KL, Foster DC;
 XX
 XX WPI: 1996-251006/25.
 XX N-PSDB; AAT32795, AAT32796.
 XX
 XX New DNA encoding modified forms of opt. activated protein C - and related
 transformed cells for prodn. of recombinant protein C for use e.g. as an
 anti-thrombotic agent.
 XX
 XX Example 1, Fig 2A-C; 34pp; English.
 XX
 XX Human protein C (AAW02600) is a zymogen of a serine protease that plays
 an important role in the regulation of blood coagulation and the
 generation of fibrinolytic activity in vivo. It is synthesised in the
 liver and processed to a 2-chain molecule, which is itself converted to
 activated protein C. Protein C and activated protein C are useful in the
 treatment of thrombotic disorders. They can be produced e.g. in mammalian
 host cells using a cDNA clone (AAT32795) derived from Hep G2 cells.
 CC Variant protein C, modified to improve cleavage between the heavy and
 CC light chains of the circulating intermediate, can also be produced.
 CC (Updated on 25-MAR-2003 to correct PF field.)
 CC
 XX
 SQ Sequence 461 AA;
 Query Match 100.0%; Score 2324; DB 2; Length 461;
 Best local similarity 100.0%; Pred. No. 3; 3e-143; Indels 0; Gaps 0;
 Matches 419; Conservative 0; Mismatches 0;
 QY 1 ANSTFEHRHSLSRECEIEICDFEAKELFQVNDTLAFWSKHVGDCLVLPENPCA 60
 DB 43 ANSTFEHRHSLSRECEIEICDFEAKELFQVNDTLAFWSKHVGDCLVLPENPCA 102
 QY 61 SLCCGHTCTIDIGSPSCDCRSWGRCFCQREVSTFNCSDNNGCTHYCLEEVRRCSC 120
 DB 103 SLCCGHTCTIDIGSPSCDCRSWGRCFCQREVSTFNCSDNNGCTHYCLEEVRRCSC 162
 QY 121 ARGKLGDLLOCHPAVPCGPRPKMKMKRSHTKPTEDQEQVDPRLDGKMTREGD 180
 DB 163 ARGKLGDLLOCHPAVPCGPRPKMKMKRSHTKPTEDQEQVDPRLDGKMTREGD 222
 QY 181 SPWGVLLDSKKLACGAVLTHPSWVLTAAHCWDESXLLVRLGEYDLRRMRKWLIDI 240

DB 223 SPQVVLDSKKKLAAGAVLIHPSWVLTAAHQMDESKKLVRLGSEYDLRMEKWEELDI 282
 QY 241 KEVFEHFNYSKSTTDNDIALHLAOPATISQTIPTCLPDSGLARELNQAQGETLVYTW 300
 DB 283 KEVFEHFNYSKSTTDNDIALHLAOPATISQTIPTCLPDSGLARELNQAQGETLVYTW 342
 QY 301 GYHSREKAKNRFTVNFITKIPVPHNECEVMSNMVSENNLCAGILGRQACEGDS 360
 DB 343 GYHSREKAKNRFTVNFITKIPVPHNECEVMSNMVSENNLCAGILGRQACEGDS 402
 QY 361 GGPWVASFHGTWFLVGLVSWGEGCGLLHNYGYTTKVSRYLDWIHGHIRDKKAPQKSWAP 419
 DB 403 GGPWVASFHGTWFLVGLVSWGEGCGLLHNYGYTTKVSRYLDWIHGHIRDKKAPQKSWAP 461

RESULT 16
 AAY49561
 ID AAY49561 standard; protein; 461 AA.

AC AAY49561;

DT 13-JAN-2000 (first entry)

DE Human lecithin cholesterol acyltransferase protein sequence.

KW Human; coding sequence polymorphism; vascular pathology gene;

KW polymorphic site; phenotype correlation; forensic; paternity testing;

KW medicine; genetic analysis; vascular disease.

OS Homo sapiens.

PN W09950454-A2.

PD 07-OCT-1999.

PF 26-MAR-1999; 99WC-US006473.

PR 01-APR-1998; 98US-00054272.

RA (WHED) WHITEHEAD INST BIOMEDICAL RES.

PI Lander ES, Daley GQ, Cargill M, Ireland JS, Rozen SG;

DR NFI: 1999-620066/53.

DR N-PSDB; AA232180.

PT Determination of polymorphisms in genes, especially those identifying

PT predisposition to vascular disease.

PS Disclosure; Fig 24; 134pp; English.

CC AA232159 to AA232194 represent reference alleles for specifically claimed

CC nucleic acid sequences from the present invention which comprise

CC polymorphic sites as given in a table in the specification, selected from

CC 92 single nucleotide polymorphisms in which the nucleotide at the

CC polymorphic site is different from a nucleotide at the same site in a

CC reference allele. The nucleic acids, and primers and probes, are used to

CC identify polymorphisms, which may predispose an individual to disease,

CC especially a vascular disease. They can also be used in phenotype

CC correlations, forensic, paternity testing, medicine or genetic analysis.

CC AA49550 to AAY49573 represent the proteins which correspond to some of

CC the reference alleles

CC Sequence 461 AA;

Query Match 100.0%; Score 2324; DB 2; Length 461;

Best Local Similarity 100.0%; Pred. No. 3.3e-143;

Matches 419; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 61 SLCCGHTCIDIGSFSCDCRSGMEGRFCQREVSTFNCSDNCGCTHYCIEVGMRECSG 120
 DB 103 SLCCGHTCIDIGSFSCDCRSGMEGRFCQREVSTFNCSDNCGCTHYCIEVGMRECSG 162
 QY 121 APGKLGDDLLQCHPAVAFPCGRPWKMKRSHLKDPTEDQDQVDFPLIDGKMTRGD 180
 DB 163 APGKLGDDLLQCHPAVAFPCGRPWKMKRSHLKDPTEDQDQVDFPLIDGKMTRGD 222
 QY 181 SPQVVLDSKKKLAAGAVLIHPSWVLTAAHQMDESKKLVRLGSEYDLRMEKWEELDI 240
 DB 223 SPQVVLDSKKKLAAGAVLIHPSWVLTAAHQMDESKKLVRLGSEYDLRMEKWEELDI 282
 QY 241 KEVFEHFNYSKSTTDNDIALHLAOPATISQTIPTCLPDSGLARELNQAQGETLVYTW 300
 DB 283 KEVFEHFNYSKSTTDNDIALHLAOPATISQTIPTCLPDSGLARELNQAQGETLVYTW 342
 QY 301 GYHSREKAKNRFTVNFITKIPVPHNECEVMSNMVSENNLCAGILGRQACEGDS 360
 DB 343 GYHSREKAKNRFTVNFITKIPVPHNECEVMSNMVSENNLCAGILGRQACEGDS 402
 QY 361 GGPWVASFHGTWFLVGLVSWGEGCGLLHNYGYTTKVSRYLDWIHGHIRDKKAPQKSWAP 419
 DB 403 GGPWVASFHGTWFLVGLVSWGEGCGLLHNYGYTTKVSRYLDWIHGHIRDKKAPQKSWAP 461

RESULT 17
 AAB82674
 ID AAB82674 standard; protein; 461 AA.

AC AAB82674;

DT 15-OCT-2001 (first entry)

DE Wild-type human protein C.

KW Protein C; human; coronary syndrome; thrombosis; angina;

KW myocardial infarction; vascular occlusive disorder; hypercoagulation;

KW sepsis; protein C deficiency; occlusion; thrombophilia; stenosis;

KW antibacterial; immunosuppressive; thrombolytic; cardiact; antianginal;

KW anticoagulant; therapy.

OS Homo sapiens.

PN 15-OCT-2001 (first entry)

PD 15-OCT-2001 (first entry)

PF 15-OCT-2001 (first entry)

PR 15-OCT-2001 (first entry)

RA 15-OCT-2001 (first entry)

PI 15-OCT-2001 (first entry)

DR 15-OCT-2001 (first entry)

DR 15-OCT-2001 (first entry)

PT 15-OCT-2001 (first entry)

PT 15-OCT-2001 (first entry)

PT 15-OCT-2001 (first entry)

PT 15-OCT-2001 (first entry)

PT 15-OCT-2001 (first entry)

PT 15-OCT-2001 (first entry)

PT 15-OCT-2001 (first entry)

PT 15-OCT-2001 (first entry)

PT 15-OCT-2001 (first entry)

FT /note= "N-glycosylated"
 FT Disulfide-bond 140..151
 FT Disulfide-bond 162..175
 FT Disulfide-bond 183..199
 FT Disulfide-bond 198..199
 FT /note= "cleavage makes a 2-chain inactive precursor (155-
 FT amino acid light chain attached via a disulfide bond to a
 FT 262-amino acid heavy chain)"
 FT Peptide 200..211
 FT /note= "activation peptide; removal activates the 2-chain
 FT zymogen"
 FT Cleavage-site 211..212
 FT /note= "thrombin cleavage site"
 FT Disulfide-bond 238..254
 FT Modified-site 290
 FT /note= "N-glycosylated"
 FT Modified-site 355
 FT /note= "N-glycosylated"
 FT Modified-site 371
 FT /note= "N-glycosylated"
 FT Disulfide-bond 373..387
 FT Disulfide-bond 398..426
 XX MO20015793-A2.
 XX
 XX 09-AUG-2001.
 XX
 XX 19-JAN-2001; 2001MO-US000020.
 XX
 XX 02-FEB-2000; 2000US-0179801P.
 XX
 XX 14-MAR-2000; 2000US-0169197P.
 XX
 XX (ELIL) LILLY & CO ELI.
 XX
 XX Gerlitz BE, Jones BE;
 XX
 XX WPI: 2001-496919/54.
 XX
 XX N-PSDB; AAB26362.
 DR
 PT Novel human protein C derivative for treating, e.g., myocardial
 PT infarction, unstable angina, sepsis, thrombotic disorders, acute arterial
 PT thrombotic occlusion, and thromboembolism.
 XX
 XX
 XX Disclosure; Page 50-52; 63pp; English.
 XX
 XX
 XX The present sequence is that of human protein C prepro-polypeptide. The
 CC invention relates to human protein C derivatives having at least 2 amino
 CC acid substitutions, and to recombinant DNA molecules encoding such
 CC derivatives. These derivatives have increased anticoagulant activity and
 CC resistance to inactivation by serpins compared with wild-type human
 CC protein C but retain the biological activity of the wild-type protein.
 CC The amino acid substitutions are selected from H10Q, S11G, S12K, Q32E,
 CC N33D, N33F, and amino acids at positions 194, 195, 228, 249, 254, 302, or
 CC 316 of the mature protein C polypeptide substituted with Ser, Ala, Thr,
 CC His, Lys, Leu, Arg, Asn, Asp, Glu, Gly or Gln (numbering relative to the
 CC protein C mature protein sequence). Preferred protein C derivatives are
 CC given in AAB2675-78. Also claimed are a vector comprising DNA encoding
 CC the novel human protein C derivatives, transformed host cells and a
 CC method of producing the human protein C derivatives. The protein C
 CC derivatives are useful for treating coronary syndromes and disease states
 CC predisposing to thrombosis (e.g. myocardial infarction and unstable
 CC angina), vascular occlusive disorders and hypercoagulable states, sepsis
 CC (in combination with bactericidal permeability increasing protein or with
 CC tissue factor pathway inhibitor), thrombotic disorders (in combination
 CC with an anti-platelet agent or by local delivery through an intracoronary
 CC catheter), protein C deficiency, acute arterial thrombotic occlusion,
 CC thromboembolism, or stenosis in coronary, cerebral or peripheral arteries
 CC or in vascular grafts. Human patients with genetically predisposed
 CC prothrombotic disorders may be treated by gene therapy (all claimed)
 XX
 XX Sequence 461 AA;
 SQ
 Query Match 100.0%; Score 2324; DB 4; Length 461;

Best Local Similarity 100.0%; Pred. No. 3.3e-143;
 Matches 419; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
 QY 1 ANSFLEELRHSSLEKRECEIEICDPFEAKETIFQNVDTLAFNSKRYDGGCLVLEPRLPCA 60
 DB 43 ANSFLEELRHSSLEKRECEIEICDPFEAKETIFQNVDTLAFNSKRYDGGCLVLEPRLPCA 102
 QY 61 SLCCGCTGIDIGISFSCDGRSGWGRFCOREVAFNGSLDNGGCTHCLFEEVGRRCSC 120
 DB 103 SLCCGCTGIDIGISFSCDGRSGWGRFCOREVAFNGSLDNGGCTHCLFEEVGRRCSC 162
 QY 121 APGYKLGDDLQCHPAKFPQGRPMKEMKGRSHLKRDEQEDVDYDRLIDGKMTRRGD 180
 DB 153 APGYKLGDDLQCHPAKFPQGRPMKEMKGRSHLKRDEQEDVDYDRLIDGKMTRRGD 222
 QY 181 SPQVVLDSKKKACAGAVLIHRSWLTFAACMDRESKLLVGLGERYDRREKKELDLDI 240
 DB 223 SPQVVLDSKKKACAGAVLIHRSWLTFAACMDRESKLLVGLGERYDRREKKELDLDI 282
 QY 241 KEVTVHPNYSKSTTDNDIALIHLAQPATLSQTIYPICLPDSGLAREINQAGCELTWTG 300
 DB 283 KEVTVHPNYSKSTTDNDIALIHLAQPATLSQTIYPICLPDSGLAREINQAGCELTWTG 342
 QY 301 GYHSSREKAKKNTFPVNFYIKIPVPHNECSFVSNVSNMLQAGILGRDACEGDS 360
 DB 343 GYHSSREKAKKNTFPVNFYIKIPVPHNECSFVSNVSNMLQAGILGRDACEGDS 402
 QY 361 GGPVVASFPGTWEIIVGIVSWGEGCLHNYGYTKYRYDYTHGHIDKAPKQKSWAP 419
 DB 403 GGPVVASFPGTWEIIVGIVSWGEGCLHNYGYTKYRYDYTHGHIDKAPKQKSWAP 461
 RESULT 18
 AAB36895
 ID AAB36895 standard; protein. 461 AA.
 XX
 XX AAB36895;
 XX
 XX 26-FEB-2001 (first entry)
 XX
 XX Human protein C derivative 2.
 XX
 XX Protein C; human; vascular occlusive; burn; transplantation;
 XX deep vein thrombosis; sickle cell; thalassemia; thrombotic disorders;
 XX myocardial infarction; angina; stroke.
 XX
 XX Homo sapiens.
 OS
 XX
 XX MO20006754-A1.
 XX
 XX 09-NOV-2000.
 XX
 XX 13-APR-2000; 2000MO-US008722.
 XX
 XX 30-APR-1999; 99US-013801P.
 XX
 XX (ELIL) LILLY & CO ELI.
 XX
 XX Gerlitz BE, Jones BE;
 XX
 XX WPI: 2001-007227/01.
 XX
 XX N-PSDB; AAC83312.
 DR
 PT Protein C derivatives, useful for treating vascular occlusive disorder,
 PT hypercoagulable state, thrombotic disorder and disease states
 PT predisposing thrombosis, comprises specific amino acid substitutions.
 XX
 XX Claim 1; Page 44-46; 57pp; English.
 XX
 XX The present invention relates to a human protein C derivative. The
 CC protein is useful for treating vascular occlusive disorders,
 CC hypercoagulable states such as sepsis, disseminated intravascular
 CC coagulation, purpura fulminans, major trauma, major surgery, burns, adult

```
Matches 419; Conservative 0; Mismatches 0; Indels 0; Gaps 0.
```

RESULT 19
AAE08626
ID AAE08626 standard; protein; 461 AA

XX			
AC	AAE08626;		
XX			
DT	01-NOV-2001	(first entry)	
XX			
DE	Human wild type protein C.		
XX			
KW	Human; protein C derivative; anticoagulation activity; th		
KW	sepsis inactivation; acute coronary syndrome; myocardial		
KW	vascular occlusive disorder; hypercoagulable state; angiol		
KW	dissminated intravascular coagulation; DIC; burn; transi		
KW	sickle cell disease; viral haemorrhagic fever; protein C		
KW	haemolytic uremic syndrome; acute arterial thrombotic oc		
XX	thromboembolism; prothrombotic disorder; gene therapy; t		
OS	Homo sapiens.		
XX			
FH	Key	Location/Qualifiers	
FT	Peptide	1..42	
FT	/label= Signal_peptide		
FT	Protein	43..461	
FT	/label= Mature_human_wild_type_protein_C		
PX			
PN	WO200159084-A1.		

occlusive disorders, thrombotic disorders and substitutions at specified amino acid positions

SQ Sequence 461 AA;

Query Match	100.0%;	Score 2324;	DB 4;	Length 461;
Best Local Similarity	100.0%;	Pred. No. 3.3e-143;		
Matches 419; Conservative	0;	Mismatches	0;	Indels 0; Gaps 0

DB 403 GGPVVASFHGTWFLVGLVSWBGBGGLHNYGVYTKSKRYLDMHGHTRKEAPQKSNAP 461

RESULT 20
AAU99001
ID AAU99001 standard; protein; 461 AA.

XX AAU99001;
XX
XX 23-AUG-2002 (first entry)
XX
XX Human Protein C precursor protein.
XX
XX Human; Protein C; N-glycosylation; APC; activated protein C; precursor;
XX serum half-life; chromosome 2q13-q14; stroke; myocardial infarction;
XX after venous thrombosis; disseminated intravascular coagulation; DIC;
XX sepsis; septic shock; embolism; pulmonary embolism; burn; pregnancy;
XX bone marrow transplantation; major surgery; trauma; ARDS; coagulant;
XX adult respiratory distress syndrome; alpha-1 antitrypsin.
XX
XX Homo sapiens.
XX
XX Key Location/Qualifiers
XX Peptide 1..42
XX /label= Signal_peptide
XX Protein 43..461
XX /label= Mature_protein_C
XX Protein 43..197
XX /label= Light_chain
XX Peptide 198..199
XX /label= Lys_Arg_dipeptide
XX Protein 200..461
XX /label= Heavy_chain
XX Peptide 200..301
XX /label= Activation_peptide
XX
XX WO20022461-A2.
XX
XX 25-APR-2002.
XX
XX 15-OCT-2001; 2001WO-DK000679.
XX
XX 18-OCT-2000; 2000DK-00001560.
XX 18-OCT-2000; 2000US-0242268P.
XX 21-JUN-2001; 2001DK-00000970.
XX 21-JUN-2001; 2001US-0300154P.
XX
XX (MAXY-) MAXYGEN APS.
XX (MAXY-) MAXYGEN HOLDINGS LTD.
XX
XX Andersen KV, Pedersen AH, Frestgaard PO;
XX WPI; 2002-489875/52.
XX N-PSDB; AEX86038.
XX
XX Novel conjugate useful for treating or preventing septic shock, stroke
XX and myocardial infarction, comprises non-polypeptide group covalently
XX attached to protein C polypeptide comprising an attachment group.
XX
XX Example 4; Page 76-77; 92pp; English.
XX
XX The invention relates to a conjugate (I) comprising at least one non-
XX polypeptide moiety (II) (e.g. an N-glycosyl group) covalently attached to
XX a protein C polypeptide comprising an amino acid sequence which differs
XX from that of a parent protein C polypeptide (III) in at least one
XX introduced and/or at least one removed amino acid residue comprising an
XX attachment group for the non-polypeptide group (e.g. an N-glycosylation
XX site). Also included are (1) a variant (IV) of (III) comprising a
XX substitution in a position (p) where (p) is an amino acid with at least
XX 25% of its side group exposed to the surface, with the proviso that the
XX substitution is not Thr245Ser/Ala/His/Lys/Arg/Asn/Asp/Glu/Gly/Gln,
XX Tyr302Ser/Ala/Thr/His/Lys/Arg/Asn/Asp/Glu/Gly/Gln or Phe316Ser/Ala/Thr/
XX His/Lys/Arg/Asn/Asp/Glu/Gly/Gln; (2) a nucleotide sequence (V) encoding

CC (IV); (3) an expression vector (VI) comprising (V); (4) a host cell (VII)
CC comprising (V) or (VI); (5) increasing (M2) the functional in vivo half-
CC life or the serum half-life of a parent protein C polypeptide. The
CC conjugates, variants and protein C proteins are useful as medicaments,
CC and in the manufacture of medicaments for the treatment (and
CC diagnosis/prevention) of stroke, myocardial infarction, after venous
CC thrombosis, disseminated intravascular coagulation (DIC), sepsis, septic
CC shock, emboli e.g. pulmonary emboli, transplantation such as bone marrow
CC transplantation, burns, pregnancy, major surgery/trauma or adult
CC respiratory distress syndrome (ARDS). The variant protein C has an
CC increased resistance to activation by e.g. human plasma and alpha-1
CC antitrypsin. The conjugates have an increased in vivo half-life,
CC increased serum half-life, increased resistance to inhibitors, reduced
CC renal clearance, reduced immunogenicity and/or increased bioavailability.
CC The conjugate offers a number of advantages over the currently available
CC APC products, including longer duration between infusions,
CC administration of less protein, and fewer side effects. Moreover, a
CC reduced anticoagulant activity is beneficial to reduce the risk of
CC bleeding while maintaining the antiinflammatory activity of APC
CC (activated protein C) conjugates. This must be especially important when
CC the conjugate has an extended plasma life. The gene for protein C
CC located on chromosome 2q13-q14. The present sequence represents precursor
CC protein C
XX
XX

SQ Sequence 461 AA;

Query Match 100.0%; Score 2324; DB 5; Length 461;

Best Local Similarity 100.0%; Pred. No. 3.3e-143;

Matches 419; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 ANSFLERHSSLEKEIEICDFEBAKIFQNVDDTLAFAWRYVDGQCLVPLERHC 60
DB 43 ANSPLELRHSSLEKEIEICDFEBAKIFQNVDDTLAFAWRYVDGQCLVPLERHC 102
QY 61 SLCCGAGTCIDIGSFCDGSGMGRFCQREVSFNSCLDNGGCHRYCLEWGMRRSC 120
DB 103 SLCCGAGTCIDIGSFCDGSGMGRFCQREVSFNSCLDNGGCHRYCLEWGMRRSC 162
QY 121 APGYKLGGDILQCHPAVFPQGRPMWRMEKRSKSLKEDTEQDEQVDPRLIDGQMTREGD 180
DB 163 APGYKLGGDILQCHPAVFPQGRPMWRMEKRSKSLKEDTEQDEQVDPRLIDGQMTREGD 222
QY 181 SPWQVYLLDSKKKLAGAVLIHPSWYLTAAHOMESKKLTVRLGEYDAPRMKREYLDLI 240
DB 223 SPWQVYLLDSKKKLAGAVLIHPSWYLTAAHOMESKKLTVRLGEYDAPRMKREYLDLI 282
QY 241 KEVFVHNYSKSTTNDIALHLAQPATLSQTTVPICLPDSGLARELNQAGETLVYGM 300
DB 283 KEVFVHNYSKSTTNDIALHLAQPATLSQTTVPICLPDSGLARELNQAGETLVYGM 342
QY 301 GYHSREKEAKRNTFVNFIKIPVPHNEGSEWMSNVSENNLCAGILIGDPODACEGDS 360
DB 343 GYHSREKEAKRNTFVNFIKIPVPHNEGSEWMSNVSENNLCAGILIGDPODACEGDS 402
QY 361 GGPVVASFHGTWFLVGLVSWBGBGGLHNYGVYTKSKRYLDMHGHTRKEAPQKSNAP 419
DB 403 GGPVVASFHGTWFLVGLVSWBGBGGLHNYGVYTKSKRYLDMHGHTRKEAPQKSNAP 461

RESULT 21

AAU99035
ID AAU99035 standard; protein; 419 AA.XX AAU99035;
XXXX 23-AUG-2002 (first entry)
XXXX Human Protein C zymogen protein mutant S252N.
XX

XX Human; Protein C; N-glycosylation; APC; activated protein C; zymogen;
XX serum half-life; chromosome 2q13-q14; stroke; myocardial infarction;
XX after venous thrombosis; disseminated intravascular coagulation; DIC;
XX sepsis; septic shock; embolism; pulmonary embolism; burn; pregnancy;
XX

KM bone marrow transplantation; major surgery; trauma; ARDS; coagulant;
 KW adult respiratory distress syndrome; alpha-1 antitrypsin; mutant; mutein.
 XX Homo sapiens.
 OS Synthetic.
 XX
 XX Key Location/Qualifiers
 FT Protein 1..155
 FT Peptide /label= Light_chain
 FT Peptide 156..157
 FT Protein /label= Lys_Arg_dipeptide
 FT Peptide 158..419
 FT Peptide /label= Heavy_chain
 FT Peptide 158..169
 FT Misc-difference 252 /label= Activation_peptide
 FT /note= "Wild-type Ser substituted by Asn"
 XX
 XX NO200232461-A2.
 XX
 XX 25-APR-2002.
 XX
 XX 15-OCT-2001; 2001WO-DK000679.
 XX
 XX 18-OCT-2000; 2000DK-00001560.
 XX 18-OCT-2000; 2000US-0242268P.
 XX 21-JUN-2001; 2001DK-00009970.
 XX 21-JUN-2001; 2001US-0300154P.
 XX
 XX (MAXY-) MAXYGEN APS.
 XX (MAXY-) MAXYGEN HOLDINGS LTD.
 XX
 XX Andersen KV, Pedersen AH, Frestgaard PO;
 XX WPI; 2002-489875/52.
 XX
 XX Novel conjugate useful for treating or preventing septic shock, stroke
 PT and myocardial infarction, comprises non-polypeptide group covalently
 PT attached to protein C polypeptide comprising an attachment group.
 PT
 XX Claim 9; Page; 92pp; English.
 PS
 XX The invention relates to a conjugate (I) comprising at least one non-
 CC polypeptide moiety (II) (e.g. an N-glycosyl group) covalently attached to
 CC a protein C polypeptide comprising an amino acid sequence which differs
 CC from that of a parent protein C polypeptide (III) in at least one
 CC introduced and/or at least one removed amino acid residue comprising an
 CC attachment group for the non-polypeptide group (e.g. an N-glycosylation
 CC site). Also included are (1) a variant (IV) of (III) comprising a
 CC substitution in a position (P) where (P) is an amino acid with at least
 CC 25% of its side group exposed to the surface, with the proviso that the
 CC substitution is not Thr245Ser/Ala/His/Lys/Arg/Asn/Asp/Glu/Gly/Gln,
 CC Ty305Ser/Ala/Thr/His/Lys/Arg/Asn/Asp/Glu/Gly/Gln or Phe16Ser/Ala/Thr/
 CC His/Lys/Arg/Asn/Asp/Glu/Gly/Gln; (2) a nucleotide sequence (V) encoding
 CC (IV); (3) an expression vector (VI) comprising (V); (4) a host cell (VII)
 CC comprising (V) or (VI); (5) increasing (M2) the functional in vivo half-
 CC life of the serum half-life of a parent protein C polypeptide. The
 CC conjugates, variants and protein C proteins are useful as medicaments,
 CC and in the manufacture of medicaments for the treatment (and
 CC diagnosis/prevention) of stroke, myocardial infarction, after venous
 CC thrombosis, disseminated intravascular coagulation (DIC), sepsis, septic
 CC shock, emboli e.g. pulmonary emboli, transplantation such as bone marrow
 CC transplantation, burns, pregnancy, major surgery/trauma or adult
 CC respiratory distress syndrome (ARDS). The variant protein C has an
 CC increased resistance to activation by e.g. human plasma and alpha-1
 CC antitrypsin. The conjugates have an increased in vivo half-life, reduced
 CC renal clearance, reduced immunogenicity and/or increased bioavailability.
 CC The conjugate offers a number of advantages over the currently available
 CC APC products, including longer duration between injections. Moreover, a
 CC administration of less protein, and fewer side effects. Moreover, a
 CC reduced anticoagulant activity is beneficial to reduce the risk of
 CC bleeding while maintaining the antiinflammatory activity of APC

CC (activated protein C) conjugates. This must be especially important when
 CC the conjugate has an extended plasma life. The gene for protein C is
 CC located on chromosome 2q13-q14. The present sequence represents a zymogen
 CC protein C variant of the invention. Note: The present sequence is not
 CC shown in the specification but was created by the indexer using the
 CC protein C sequence appearing as AA099002 and the information in claim 9
 XX
 XX SQ Sequence 419 AA;
 XX
 XX Query Match 99.9%; Score 2321; DB 5; Length 419;
 XX Best Local Similarity 99.8%; Pred. No. 4.8e-143;
 XX Matches 418; Conservative 1; Mismatches 0; Gaps 0;
 XX
 XX QY 1 ANSFLEELRHSSLEKRECEIEICDFEEAKKIFQNVDDTLAFMSKRVDDQCLVPLEHPCA 60
 XX 1 ANSFLEELRHSSLEKRECEIEICDFEEAKKIFQNVDDTLAFMSKRVDDQCLVPLEHPCA 60
 XX
 XX QY 61 SICCGHGTICDIGISFCSCDRSGMEGRFCQREVSFLNCSLDNGCTHYCLEFVGRRCSC 120
 XX 61 SICCGHGTICDIGISFCSCDRSGMEGRFCQREVSFLNCSLDNGCTHYCLEFVGRRCSC 120
 XX
 XX Db 61 SICCGHGTICDIGISFCSCDRSGMEGRFCQREVSFLNCSLDNGCTHYCLEFVGRRCSC 120
 XX
 XX QY 121 ABGYKIGDILQCHPAVKPCGRPMKMEKKRSHLRDDEQDQVPRLLDGKMTKRGD 180
 XX 121 ABGYKIGDILQCHPAVKPCGRPMKMEKKRSHLRDDEQDQVPRLLDGKMTKRGD 180
 XX
 XX Db 121 ABGYKIGDILQCHPAVKPCGRPMKMEKKRSHLRDDEQDQVPRLLDGKMTKRGD 180
 XX
 XX QY 181 SPQVQLDLSKCKLACGAVLHPSWLTAAHCDSEKSLVRLGSDLRMEKWEIDLDI 240
 XX 181 SPQVQLDLSKCKLACGAVLHPSWLTAAHCDSEKSLVRLGSDLRMEKWEIDLDI 240
 XX
 XX Db 181 SPQVQLDLSKCKLACGAVLHPSWLTAAHCDSEKSLVRLGSDLRMEKWEIDLDI 240
 XX
 XX QY 241 KEVFHPRYSSTTDNIALHLAQPATLSQTIVPLCPDSGLARELNQAGETLVTSW 300
 XX 241 KEVFHPRYSSTTDNIALHLAQPATLSQTIVPLCPDSGLARELNQAGETLVTSW 300
 XX
 XX Db 241 KEVFHPRYSSTTDNIALHLAQPATLSQTIVPLCPDSGLARELNQAGETLVTSW 300
 XX
 XX QY 301 GYSRSREKAKRNTFLANFIKIPVPHNECEVSNMVSNNLCAGLGDRODACEGDS 360
 XX 301 GYSRSREKAKRNTFLANFIKIPVPHNECEVSNMVSNNLCAGLGDRODACEGDS 360
 XX
 XX Db 301 GYSRSREKAKRNTFLANFIKIPVPHNECEVSNMVSNNLCAGLGDRODACEGDS 360
 XX
 XX QY 361 GGPVVASFPGTWFLVGLVSWGECGLHNYGVYTKYSRYLDWHIRDKERAPQKSWAP 419
 XX 361 GGPVVASFPGTWFLVGLVSWGECGLHNYGVYTKYSRYLDWHIRDKERAPQKSWAP 419
 XX
 XX Db 361 GGPVVASFPGTWFLVGLVSWGECGLHNYGVYTKYSRYLDWHIRDKERAPQKSWAP 419
 XX
 XX RESULT 22
 XX AAU99031
 XX ID AAU99031 standard; protein; 419 AA.
 XX
 XX AC AAU99031;
 XX
 XX DT 23-AUG-2002 (first entry)
 XX
 XX DE Human Protein C zymogen protein mutant S250N.
 XX
 XX KW Human; Protein C; N-glycosylation; APC; activated protein C; zymogen;
 XX serum half-life; chromosome 2q13-q14; stroke; myocardial infarction;
 KW after venous thrombosis; disseminated intravascular coagulation; DIC;
 KW sepsis; septic shock; embolism; pulmonary embolism; burn; pregnancy;
 KW bone marrow transplantation; major surgery; trauma; ARDS; coagulant;
 KW adult respiratory distress syndrome; alpha-1 antitrypsin; mutant; mutein.
 XX
 XX OS Homo sapiens.
 XX
 XX Key Location/Qualifiers
 FT Protein 1..155
 FT Peptide /label= Light_chain
 FT Peptide 156..157
 FT Protein /label= Lys_Arg_dipeptide
 FT Peptide 158..419
 FT Peptide /label= Heavy_chain
 FT Peptide 158..169
 FT Misc-difference 250 /label= Activation_peptide
 FT /note= "Wild-type Ser substituted by Asn"

XX W0200232461-A2.
 EN 25-APR-2002.
 PD 15-OCT-2001; 2001MO-DK00679.
 XX 18-OCT-2000; 2000DK-00001560.
 PR 18-OCT-2000; 2000US-0242268P.
 PR 21-JUN-2001; 2001DK-00000970.
 PR 21-JUN-2001; 2001US-0300154P.
 XX (MAXY-) MAXYGEN A.B.S.
 PA (MAXY-) MAXYGEN HOLDINGS LTD.
 XX Andersen XV, Pedersen AH, Frestgaard PO;
 PI WPI, 2002-489875/52.
 DR
 XX
 XX Novel conjugate useful for treating or preventing septic shock, stroke
 PT and myocardial infarction, comprises non-polypeptide group covalently
 PT attached to protein C polypeptide comprising an attachment group.
 XX
 XX Claim 9; Page: 92pp; English.

The invention relates to a conjugate (I) comprising at least one non-
 polypeptide moiety (II) (e.g. an N-glycosyl group) covalently attached to
 a protein C polypeptide comprising an amino acid sequence which differs
 from that of a parent protein C polypeptide (III) in at least one
 introduced and/or at least one removed amino acid residue comprising an
 attachment group for the non-polypeptide group (e.g. an N-glycosylation
 site). Also included are (1) a variant (IV) of (III) comprising a
 substitution in a position (P) where (P) is an amino acid with at least
 25% of its side group exposed to the surface, with the proviso that the
 substitution is not Thr245Ser/Ala/His/Lys/Arg/Asn/Asp/Glu/Gly/Gln,
 Tyr302Ser/Ala/Thr/His/Lys/Arg/Asn/Asp/Glu/Gly/Gln or Phe316Ser/Ala/Thr/
 His/Lys/Arg/Asn/Asp/Glu/Gly/Gln; (2) a nucleotide sequence (V) encoding
 (IV); (3) an expression vector (VI) comprising (V); (4) a host cell (VII)
 comprising (V) or (VI); (5) increasing (W2) the functional in vivo half-
 life or the serum half-life of a parent protein C polypeptide. The
 conjugates, variants and protein C proteins are useful as medicaments,
 and in the manufacture of medicaments for the treatment (and
 diagnosis/prevention) of stroke, myocardial infarction, after venous
 thrombosis, disseminated intravascular coagulation (DIC), sepsis, septic
 shock, emboli e.g. pulmonary emboli, transplantation such as bone marrow
 transplantation, burns, pregnancy, major surgery/trauma or adult
 respiratory distress syndrome (ARDS). The variant protein C has an
 increased resistance to activation by e.g. human plasma and alpha-1
 antitrypsin. The conjugates have an increased in vivo half-life,
 increased serum half-life, increased resistance to inhibitors, reduced
 renal clearance, reduced immunogenicity and/or increased bioavailability.
 The conjugate offers a number of advantages over the currently available
 APC products, including longer duration between injections, a
 administration of less protein, and fewer side effects. Moreover, a
 reduced anticoagulant activity is beneficial to reduce the risk of
 bleeding while maintaining the antiinflammatory activity of APC
 (activated protein C) conjugates. This must be especially important when
 the conjugate has an extended plasma life. The gene for protein C is
 located on chromosome 2q13-q14. The present sequence represents a zymogen
 protein C variant of the invention. Note: The present sequence is not
 shown in the specification but was created by the indexer using the
 protein C sequence appearing as AAU99002 and the information in claim 9

Query Match 99.9%; Score 2321; DB 5; Length 419;
 Best Local Similarity 99.8%; Pred. No. 4,8e-143;
 Matches 418; Conservative 1; Mismatches 0; Indels 0; Gaps 0;

1 ANSFEEERHSTERRCIEETCDPEFAKRFQNVDDTLAFNPKVSDQGLVPLEHPCA 60
 1 ANSFEEERHSTERRCIEETCDPEFAKRFQNVDDTLAFNPKVSDQGLVPLEHPCA 60

QY 61 SLCCGGTCITDGTGSFSCDQCSGMEGRFCQREVSFLNCSLDNGGCTHYCLEVGNRCSC 120
 DB 61 SLCCGGTCITDGTGSFSCDQCSGMEGRFCQREVSFLNCSLDNGGCTHYCLEVGNRCSC 120
 QY 121 APGYKLGDDLLQCHPAVKEPCQRPWKREKRSKSLKRDDEDEDQVDPRLIDKMRERD 180
 DB 121 APGYKLGDDLLQCHPAVKEPCQRPWKREKRSKSLKRDDEDEDQVDPRLIDKMRERD 180
 QY 181 SPQVVLDSKKKLLACAVLTHPSAVLPAACOMDESCKLVLGSDLRKWEKELDLDI 240
 DB 181 SPQVVLDSKKKLLACAVLTHPSAVLPAACOMDESCKLVLGSDLRKWEKELDLDI 240
 QY 241 KEVFEVFNYSKSTTDNDIALHLAQPATLSQTIPLCLPDSGLARBLNQAQETLVTEM 300
 DB 241 KEVFEVFNYSKSTTDNDIALHLAQPATLSQTIPLCLPDSGLARBLNQAQETLVTEM 300
 QY 301 GYHSSEKKAQRNRTFVNLTKTPVFNHESSEVMSNMSBNWLCAGLGRDQACBGSS 360
 DB 301 GYHSSEKKAQRNRTFVNLTKTPVFNHESSEVMSNMSBNWLCAGLGRDQACBGSS 360
 QY 361 GGPVVASFHGTWFLVLSWNGEGGLAHYGVYTKVSRYLDTWIGHIDKEAPQKSWAP 419
 DB 361 GGPVVASFHGTWFLVLSWNGEGGLAHYGVYTKVSRYLDTWIGHIDKEAPQKSWAP 419

RESULT 23
 AAP81205
 ID AAP81205 standard; protein; 461 AA.
 AC AAP81205;
 XX 25-MAR-2003 (revised)
 DT 05-DEC-1990 (first entry)
 DE Human protein C.
 KW Human protein C; blood coagulation disorders.
 XX Homo sapiens.
 CS
 EH Key Location/Qualifiers
 FT Peptide /label=light chain peptide
 FT Region /label=linker di-peptide
 FT Peptide /label=heavy chain peptide
 XX EP266190-A.
 PD 04-MAY-1988.
 XX 28-OCT-1987; 87EP-00309528.
 PR 29-OCT-1986; 86US-00924462.
 XX (ZYMO) ZYMOGENETICS INC.
 PA Foster DC, Murray MJ, Berkner KU;
 PI WPI, 1988-121259/18
 DR N-PSDB; AAN81563, AAN81564.
 XX Protein C DNA coding sequence and expression vector for prodn. - used for
 PT treating blood coagulation disorders.
 XX Disclosure; Page 7; 35pp; English.
 XX This protein C sequence is obt'd. upon transformation of mammalian host
 CC (mus with a recombinant DNA sequence comprising cDNA and genomic DNA
 CC (mus with a recombinant DNA sequence comprising cDNA and genomic DNA
 CC (mus with a recombinant DNA sequence comprising cDNA and genomic DNA
 CC of the cells has substantially the same biologic- al activity as natural
 CC protein C and is hence useful in the treat- ment of blood coagulation

CC disorders. See also AAN81564. (Updated on 25-MAR-2003 to correct PA
field.)

XX Sequence 461 AA;

Query Match 99.9%; Score 2321; DB 1; Length 461;
Best Local Similarity 99.8%; Pred. No. 5.2e-143;
Matches 418; Conservative 1; Mismatches 0; Indels 0; Gaps 0;

QY 1 ANSFLELRHSSLEKEICIEICDFEAKETIFQVVDTLAFWSKHVGDQCLVPLRHPCA 60
DB 43 ANSFLELRHSSLEKEICIEICDFEAKETIFQVVDTLAFWSKHVGDQCLVPLRHPCA 102
QY 61 SLCCGHTCIDIGISFSCDCRSQWEGRFQREVSFLNCSLDNGGCTHYCLIEVGMRCSC 120
DB 103 SLCCGHTCIDIGISFSCDCRSQWEGRFQREVSFLNCSLDNGGCTHYCLIEVGMRCSC 162
QY 121 APGYKLGDDLLQCHPAVFPQGRPMKMEKRSKLRDTEDQVDPRLDGKMTRRGD 180
DB 163 APGYKLGDDLLQCHPAVFPQGRPMKMEKRSKLRDTEDQVDPRLDGKMTRRGD 222
QY 181 SPQVVLDSKKKLAGAVLIHPSWLTAAHQMBESKLLVRLGEYDLRRWEKELDDI 240
DB 223 SPQVVLDSKKKLAGAVLIHPSWLTAAHQMBESKLLVRLGEYDLRRWEKELDDI 282
QY 241 KEVFAHPNYSKSTTNDIALHLAOPATLSQTIPICLPSGLAERELNQAQETLVGM 300
DB 283 KEVFAHPNYSKSTTNDIALHLAOPATLSQTIPICLPSGLAERELNQAQETLVGM 342
QY 301 GYHSSREKAKNRRTFVNFIKIPVPHNECSEVSNMVSNNMLCAGILGRDACEGDS 360
DB 343 GYHSSREKAKNRRTFVNFIKIPVPHNECSEVSNMVSNNMLCAGILGRDACEGDS 402
QY 361 GGPVVASFHGTWFLVGLVSGGCGLLHNYGYTVTSRYLDMHGHIRDEAPQKSWAP 419
DB 403 GGPVVASFHGTWFLVGLVSGGCGLLHNYGYTVTSRYLDMHGHIRDEAPQKSWAP 461

RESULT 24
ID AAN90070 standard; protein; 461 AA.
XX AAN90070;
XX AC
XX 25-MAR-2003 (revised)
DT 01-NOV-1989 (first entry)
DB
XX
DE Human protein C.
XX
KM Human protein C; anti-coagulant.
XX
OS Homo sapiens.
XX
XX Key Location/Qualifiers
FT 1..42
FT /note="signal-peptide"
FT 43..197
FT /note="light chain"
FT Region 198..199
FT Region 200..211
FT /note="activation peptide"
FT 212..461
FT /note="activated heavy chain"
XX
XX EF319312-A.
XX
XX PD 07-JUN-1989.
XX
XX PF 02-DEC-1988; 88EP-00311421.
XX
XX PR 04-DEC-1987; 87US-00129027.
XX
XX PA (EHLI) LILLY & CO ELI.

XX Bang NU, Ehrlich HU, Grimmel BW, Jaekums SR;
PI
XX WPI; 1989-167318/23.
XX
XX
XX New DNA cpds. and vectors - used for direct expression of activated human
PT protein C.
XX
XX Disclosure; Page 4; 48pp; English.
PS

XX Nascent human protein C produces inactive protein C. It is used as an
CC anti-coagulant in myocardial infarction and deep vein thrombosis. The
CC patent discloses a recombinant way of making activated protein C. Amino
CC acids 1-42 encode the signal peptide and propeptide; 43-197 constitute
CC the light chain of both the zymogen and activated forms; 198-199 residues
CC are believed to be removed to form 2-chain protein C; 200-211 are the
CC activation peptides removed from the zymogen to form activated protein C;
CC 212-461 constitute the activated heavy chain after post-translational
CC modification. (Updated on 25-MAR-2003 to correct PD field.) (Updated on
CC 25-MAR-2003 to correct PR field.) (Updated on 25-MAR-2003 to correct PA
CC field.)

XX Sequence 461 AA;

Query Match 99.9%; Score 2321; DB 1; Length 461;
Best Local Similarity 99.8%; Pred. No. 5.2e-143;
Matches 418; Conservative 1; Mismatches 0; Indels 0; Gaps 0;

QY 1 ANSFLELRHSSLEKEICIEICDFEAKETIFQVVDTLAFWSKHVGDQCLVPLRHPCA 60
DB 43 ANSFLELRHSSLEKEICIEICDFEAKETIFQVVDTLAFWSKHVGDQCLVPLRHPCA 102
QY 61 SLCCGHTCIDIGISFSCDCRSQWEGRFQREVSFLNCSLDNGGCTHYCLIEVGMRCSC 120
DB 103 SLCCGHTCIDIGISFSCDCRSQWEGRFQREVSFLNCSLDNGGCTHYCLIEVGMRCSC 162
QY 121 APGYKLGDDLLQCHPAVFPQGRPMKMEKRSKLRDTEDQVDPRLDGKMTRRGD 180
DB 163 APGYKLGDDLLQCHPAVFPQGRPMKMEKRSKLRDTEDQVDPRLDGKMTRRGD 222
QY 181 SPQVVLDSKKKLAGAVLIHPSWLTAAHQMBESKLLVRLGEYDLRRWEKELDDI 240
DB 223 SPQVVLDSKKKLAGAVLIHPSWLTAAHQMBESKLLVRLGEYDLRRWEKELDDI 282
QY 241 KEVFAHPNYSKSTTNDIALHLAOPATLSQTIPICLPSGLAERELNQAQETLVGM 300
DB 283 KEVFAHPNYSKSTTNDIALHLAOPATLSQTIPICLPSGLAERELNQAQETLVGM 342
QY 301 GYHSSREKAKNRRTFVNFIKIPVPHNECSEVSNMVSNNMLCAGILGRDACEGDS 360
DB 343 GYHSSREKAKNRRTFVNFIKIPVPHNECSEVSNMVSNNMLCAGILGRDACEGDS 402
QY 361 GGPVVASFHGTWFLVGLVSGGCGLLHNYGYTVTSRYLDMHGHIRDEAPQKSWAP 419
DB 403 GGPVVASFHGTWFLVGLVSGGCGLLHNYGYTVTSRYLDMHGHIRDEAPQKSWAP 461

RESULT 25
ID AAN99074 standard; protein; 419 AA.
XX AAN99074;
XX AC

XX 23-AUG-2002 (first entry)

XX Human Protein C zymogen protein mutant V339T.

XX Human, Protein C; N-glycosylation; APC; activated protein C; zymogen;
KM serum half-life; chromosome 2q13-q14; stroke; myocardial infarction;
KM after venous thrombosis; disseminated intravascular coagulation; DIC;
KM sepsis; septic shock; embolism; pulmonary embolism; burn; pregnancy;
KM bone marrow transplantation; major surgery; trauma; ARDS; coagulant;
KM adult respiratory distress syndrome; alpha-1 antitrypsin; mutant; mutein.

XX Homo sapiens.
OS Synthetic.
XX
FH Key Location/Qualifiers
FT Protein 1..155
FT Peptide /label=light_chain
FT Peptide 156..157
FT Peptide /label=Lys_Arg_dipeptide
FT Protein 158..419
FT Peptide /label=Heavy_chain
FT Peptide 158..169
FT Misc-difference 339
FT /note="Wild-type Val substituted by Thr"
XX
XX WO200232461-A2.
XX
XX 25-APR-2002.
XX
XX 15-OCT-2001; 2001MO-DK000679.
XX
XX 18-OCT-2000; 2000DK-00001560.
XX 18-OCT-2000; 2000US-0242268P.
XX 21-JUN-2001; 2001DK-00000970.
XX 21-JUN-2001; 2001US-0300154P.
XX
XX (MAXY-) MAXYGEN APS.
XX (MAXY-) MAXYGEN HOLDINGS LTD.
XX
XX Andersen KV, Pedersen AH, Friesgaard PO;
XX
XX WFI; 2002-489875/52.
XX
XX Novel conjugate useful for treating or preventing septic shock, stroke
XX and myocardial infarction, comprises non-polypeptide group covalently
XX attached to protein C polypeptide comprising an attachment group.
XX
XX Claim 9; Page: 92pp; English.
XX
XX The invention relates to a conjugate (I) comprising at least one non-
XX polypeptide moiety (II) (e.g. an N-glycosyl group) covalently attached to
XX a protein C polypeptide comprising an amino acid sequence which differs
XX from that of a parent protein C polypeptide (III) in at least one
XX introduced and/or at least one removed amino acid residue comprising an
XX attachment group for the non-polypeptide group (e.g. an N-glycosylation
XX site). Also included are (1) a variant (IV) of (III) comprising a
XX substitution in a position (p) where (p) is an amino acid with at least
XX 25% of its side group exposed to the surface, with the proviso that the
XX substitution is not Thr245Ser/Ala/His/Lys/Arg/Asn/Asp/Glu/Gly/Gln,
XX His/Lys/Arg/Asn/Asp/Glu/Gly/Gln; (2) a nucleotide sequence (V) encoding
XX (IV); (3) an expression vector (VI) comprising (V); (4) a host cell (VII)
XX comprising (V) or (VI); (5) increasing (W2) the functional in vivo half-
XX life or the serum half-life of a parent protein C polypeptide. The
XX conjugates, variants and protein C proteins are useful as medicaments,
XX and in the manufacture of medicaments for the treatment (and
XX diagnosis/prevention) of stroke, myocardial infarction, after venous
XX thrombosis, disseminated intravascular coagulation (DIC), sepsis, septic
XX shock, emboli e.g. pulmonary emboli, transplantation such as bone marrow
XX transplantation, burns, pregnancy, major surgery/trauma or adult
XX respiratory distress syndrome (ARDS). The variant protein C has an
XX increased resistance to activation by e.g. human plasma and alpha-1
XX antitrypsin. The conjugates have an increased in vivo half-life,
XX increased serum half-life, increased resistance to inhibitors, reduced
XX renal clearance, reduced immunogenicity and/or increased bioavailability.
XX The conjugate offers a number of advantages over the currently available
XX APC products, including longer duration between injections,
XX administration of less protein, and fewer side effects. Moreover, a
XX reduced anticoagulant activity is beneficial to reduce the risk of
XX bleeding while maintaining the antiinflammatory activity of APC
XX (activated protein C) conjugates. This must be especially important when
XX the conjugate has an extended plasma life. The gene for protein C is

CC located on chromosome 2q13-q14. The present sequence represents a zymogen
CC protein C variant of the invention. Note: The present sequence is not
CC shown in the specification but was created by the indexer using the
CC protein C sequence appearing as AAU99002 and the information in claim 9
XX
XX SQ Sequence 419 AA;
XX
XX Query Match 99.8%; Score 2320; DB 5; Length 419;
XX Best Local Similarity 99.8%; Pred. No. 5.5e-143;
XX Matches 418; Conservative 0; Mismatches 1; Indels 0; Gaps 0;
XX
QY 1 ANSFLELRHSSLEKECEIEI CDPEEAKETIQNDPTLAWSKHYDQGLVPLERPCA 60
DB 1 ANSFLELRHSSLEKECEIEI CDPEEAKETIQNDPTLAWSKHYDQGLVPLERPCA 60
QY 61 SLCCGHCCTIDIGSFQDQSGMEGRFCQREVFELNCSLDNCGCTHCLBEVGRRCSC 120
DB 61 SLCCGHCCTIDIGSFQDQSGMEGRFCQREVFELNCSLDNCGCTHCLBEVGRRCSC 120
QY 121 APGYKGDILLQCHPAVPEPCGRPWPRMEKKRSHLKEDTEDQEDQVPEPLIDGKQTERGD 180
DB 121 APGYKGDILLQCHPAVPEPCGRPWPRMEKKRSHLKEDTEDQEDQVPEPLIDGKQTERGD 180
QY 181 SPQWVILDSKKKLAAGAVLIHPSWVLTAAQNDSEKLLVRLGEYDPRREKHELDLDI 240
DB 181 SPQWVILDSKKKLAAGAVLIHPSWVLTAAQNDSEKLLVRLGEYDPRREKHELDLDI 240
QY 241 KEVFEHNSKSTTNDIALHLAOPATLSQTIYVICLPDPSLAERELNQAQETLVGTG 300
DB 241 KEVFEHNSKSTTNDIALHLAOPATLSQTIYVICLPDPSLAERELNQAQETLVGTG 300
QY 301 GYHSSREKAKRRTFVNFILIPVPENECEVSNWSENNLCAGLIGDRQACGDS 360
DB 301 GYHSSREKAKRRTFVNFILIPVPENECEVSNWSENNLCAGLIGDRQACGDS 360
QY 361 GGPWVASFHQWTVLGLVSWGEGGGLHNYGYTGVSYLDLHGHIRPEKAPQKSNAP 419
DB 361 GGPWVASFHQWTVLGLVSWGEGGGLHNYGYTGVSYLDLHGHIRPEKAPQKSNAP 419
XX
XX RESUT 26
XX AAU99033
XX ID AAU99033 standard; protein, 419 AA.
XX
XX AC AAU99033;
XX
XX DT 23-AUG-2002 (first entry)
XX
XX Human Protein C zymogen protein mutant K251N.
XX
XX Human; Protein C; N-glycosylation; APC; activated protein C; zymogen;
XX serum half-life; chromosome 2q13-q14; stroke; myocardial infarction;
XX after venous thrombosis; disseminated intravascular coagulation; DIC;
XX sepsis; septic shock; embolism; pulmonary embolism; burn; pregnancy;
XX bone marrow transplantation; major surgery; trauma; ARDS; coagulant;
XX adult respiratory distress syndrome; alpha-1 antitrypsin; mutant; mutein.
XX
XX Homo sapiens.
XX Synthetic.
XX
XX FH Key Location/Qualifiers
FT Protein 1..155
FT Peptide /label=light_chain
FT Peptide 156..157
FT Peptide /label=Lys_Arg_dipeptide
FT Protein 158..419
FT Peptide /label=Heavy_chain
FT Peptide 158..169
FT Misc-difference 251
FT /note="Wild-type Lys substituted by Asn"
XX
XX WO200232461-A2.

XX 25-APR-2002.
 PD 15-OCT-2001; 2001MO-DK00679.
 XX 18-OCT-2000; 2000DK-00001560.
 XX 18-OCT-2000; 2000US-0242268P.
 PR 21-JUN-2001; 2001DK-00000970.
 PR 21-JUN-2001; 2001US-0300154P.
 XX (MAXY-) MAXYGEN APS.
 PA (MAXY-) MAXYGEN HOLDINGS LTD.
 PI Andersen KV, Pedersen AH, Freshgaard PO;
 DR WPI; 2002-489875/52.
 XX Novel conjugate useful for treating or preventing septic shock, stroke
 PT and myocardial infarction, comprises non-polypeptide group covalently
 PT attached to protein C polypeptide comprising an attachment group.
 XX Claim 9, Page; 92pp; English.

CC The invention relates to a conjugate (I) comprising at least one non-
 CC polypeptide moiety (II) (e.g. an N-glycosyl group) covalently attached to
 CC a protein C polypeptide comprising an amino acid sequence which differs
 CC from that of a parent protein C polypeptide (III) in at least one
 CC introduced and/or at least one removed amino acid residue comprising an
 CC attachment group for the non-polypeptide group (e.g. an N-glycosylation
 CC site). Also included are (1) a variant (IV) of (III) comprising a
 CC substitution in a position (P) where (P) is an amino acid with at least
 CC 25% of its side group exposed to the surface, with the proviso that the
 CC substitution is not Thr245Ser/Ala/His/Lys/Arg/Asn/Asp/Glu/Gly/Gln/
 CC Tyr302Ser/Ala/Thr/His/Lys/Arg/Asn/Asp/Glu/Gly/Gln or Phe316Ser/Ala/Thr/
 CC His/Lys/Arg/Asn/Asp/Glu/Gly/Gln; (2) a nucleotide sequence (V) encoding
 CC (IV); (3) an expression vector (VI) comprising (V); (4) a host cell (VII)
 CC comprising (V) or (VI); (5) increasing (M2) the functional in vivo half-
 CC life or the serum half-life of a parent protein C polypeptide. The
 CC conjugates, variants and protein C proteins are useful as medicaments,
 CC and in the manufacture of medicaments for the treatment (and
 CC diagnosis/prevention) of stroke, myocardial infarction, after venous
 CC thrombosis, disseminated intravascular coagulation (DIC), sepsis, septic
 CC shock, emboli e.g. pulmonary emboli, transplantation such as bone marrow
 CC transplantation, burns, pregnancy, major surgery/trauma or adult
 CC respiratory distress syndrome (ARDS). The variant protein C has an
 CC increased resistance to activation by e.g. human plasma and alpha-1
 CC antitrypsin. The conjugates have an increased in vivo half-life,
 CC increased serum half-life, increased resistance to inhibitors, reduced
 CC renal clearance, reduced immunogenicity and/or increased bioavailability.
 CC The conjugate offers a number of advantages over the currently available
 CC APC products, including longer duration between infections.
 CC administration of less protein, and fewer side effects. Moreover, a
 CC reduced anticoagulant activity is beneficial to reduce the risk of
 CC bleeding while maintaining the antiinflammatory activity of APC
 CC (activated protein C) conjugates. This must be especially important when
 CC the conjugate has an extended plasma life. The gene for protein C is
 CC located on chromosome 2q13-q14. The present sequence represents a zymogen
 CC protein C variant of the invention. Note: The present sequence is not
 CC shown in the specification but was created by the indexer using the
 CC protein C sequence appearing as AAU99002 and the information in claim 9
 CC XX

SO Sequence 419 AA;
 Query Match 99.8%; Score 2319; DB 5; Length 419;
 Best Local Similarity 99.8%; Freq. No. 6.4e-143;
 Matches 418; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 ANSFLEELRHSSLSRECEIEICDPEEAKETQWVDDTLAFMSKHYDQGLVPLHPCA 60
 DB 1 ANSFLEELRHSSLSRECEIEICDPEEAKETQWVDDTLAFMSKHYDQGLVPLHPCA 60
 QY 61 SLCCGHGTCTDGGISFSCDCRSQWGRFCQREVSFLNCSLDNGGCTHYCLEEYGNRRCSG 120

DB 61 SLCCGHGTCTDGGISFSCDCRSQWGRFCQREVSFLNCSLDNGGCTHYCLEEYGNRRCSG 120
 QY 121 APGYKLGDDLLQCHPAVKEPCGRPMKMEKKSHLRDPEQDQVDPRLIDGKXTRRGD 180
 DB 121 APGYKLGDDLLQCHPAVKEPCGRPMKMEKKSHLRDPEQDQVDPRLIDGKXTRRGD 180
 QY 181 SPMQVLLDSSKKLACGAVLIHPSWVLTAAHOMDSKKLVRLGETDLRMEKMLDLDI 240
 DB 181 SPMQVLLDSSKKLACGAVLIHPSWVLTAAHOMDSKKLVRLGETDLRMEKMLDLDI 240
 QY 241 KEVPHRYNSKSTTDDTALHLAQPATLSQTTVPCIPDSGLAERELNOAGETLVGM 300
 DB 241 KEVPHRYNSKSTTDDTALHLAQPATLSQTTVPCIPDSGLAERELNOAGETLVGM 300
 QY 301 GYHSREKEAKRRRTFVNFIKIPVPHNCSRWMSNMVSHNMLCAGILGDRQDACEGDS 360
 DB 301 GYHSREKEAKRRRTFVNFIKIPVPHNCSRWMSNMVSHNMLCAGILGDRQDACEGDS 360
 QY 361 GGPVVASFHGTWFLVGLVSWBGCGLLHNYGVYTKSYRLDWTYGHIRKEKAPQKSNAP 419
 DB 361 GGPVVASFHGTWFLVGLVSWBGCGLLHNYGVYTKSYRLDWTYGHIRKEKAPQKSNAP 419

RESULT 27

ID AAU99015 standard; protein; 419 AA.
 XX

AC AAU99015;

DT 23-AUG-2002 (first entry)

DE Human Protein C zymogen protein mutant D214N.

KM Human: Protein C; N-glycosylation; APC; activated protein C; zymogen;
 KM serum half-life; chromosome 2q13-q14; stroke; myocardial infarction;
 KM after venous thrombosis; disseminated intravascular coagulation; DIC;
 KM sepsis; septic shock; embolism; pulmonary embolism; burn; pregnancy;
 KM bone marrow transplantation; major surgery; trauma; ARDS; coagulant;
 KM adult respiratory distress syndrome; alpha-1 antitrypsin; mutant; mutein.
 XX

OS Homo sapiens.
 OS Synthetic.

EH Key Location/qualifiers
 FT Protein 1..155
 FT Peptide /label= Light_chain
 FT Peptide /label= Lys_Arg_dipeptide
 FT Protein 158..419
 FT Peptide /label= Heavy_chain
 FT Peptide 158..169
 FT /label= Activation_peptide

FT Misc-difference 214
 FT /note= "Wld-type Asp substituted by Asn"

XX WO200232461-A2.

XX 25-APR-2002.

XX 15-OCT-2001; 2001MO-DK00679.

XX 18-OCT-2000; 2000DK-00001560.
 PR 18-OCT-2000; 2000US-0242268P.
 PR 21-JUN-2001; 2001DK-00000970.
 PR 21-JUN-2001; 2001US-0300154P.

XX (MAXY-) MAXYGEN APS.

PA (MAXY-) MAXYGEN HOLDINGS LTD.

PI Andersen KV, Pedersen AH, Freshgaard PO;

DR WPI; 2002-489875/52.

PT Novel conjugate useful for treating or preventing septic shock, stroke
PT and myocardial infarction, comprises non-polypeptide group covalently
PT attached to protein C polypeptide comprising an attachment group.

PS Claim 9: Page: 92pp; English.

CC The invention relates to a conjugate (I) comprising at least one non-
CC polypeptide moiety (II) (e.g. an N-glycosyl group) covalently attached to
CC a protein C polypeptide comprising an amino acid sequence which differs
CC from that of a parent protein C polypeptide (III) in at least one
CC introduced and/or at least one removed amino acid residue comprising an
CC attachment group for the non-polypeptide group (e.g. an N-glycosylation
CC site). Also included are (1) a variant (IV) of (III) comprising a
CC substitution in a position (P) where (P) is an amino acid with at least
CC 25% of its side group exposed to the surface, with the proviso that the
CC substitution is not Thr245Ser/Ala/His/Lys/Arg/Asn/Asp/Glu/Gly/Val,
CC Tyr303Ser/Ala/Thr/His/Lys/Arg/Asn/Asp/Glu/Gly/Val or Phe316Ser/Ala/Thr/
CC His/Lys/Arg/Asn/Asp/Glu/Gly/Val; (2) a nucleotide sequence (V) encoding
CC (IV); (3) an expression vector (VI) comprising (V); (4) a host cell (VII)
CC comprising (V) or (VI); (5) increasing (M2) the functional in vivo half-
CC life or the serum half-life of a parent protein C polypeptide. The
CC conjugates, variants and protein C proteins are useful as medicaments,
CC and in the manufacture of medicaments for the treatment (and
CC diagnosis/prevention) of stroke, myocardial infarction, after venous
CC thrombosis, disseminated intravascular coagulation (DIC), sepsis, septic
CC shock, emboli e.g. pulmonary emboli, major surgery/trauma or adult
CC transplantation, burns, pregnancy, major surgery/trauma or adult
CC respiratory distress syndrome (ARDS). The variant protein C has an
CC increased resistance to activation by e.g. human plasma and alpha-1
CC antitrypsin. The conjugates have an increased in vivo half-life,
CC increased serum half-life, increased resistance to inhibitors, reduced
CC renal clearance, reduced immunogenicity and/or increased bioavailability.
CC The conjugate offers a number of advantages over the currently available
CC APC products, including longer duration between infusions,
CC administration of less protein, and fewer side effects. Moreover, a
CC reduced anticoagulant activity is beneficial to reduce the risk of
CC bleeding while maintaining the anti-inflammatory activity of APC
CC (activated protein C) conjugates. This must be especially important when
CC the conjugate has an extended plasma life. The gene for protein C is
CC located on chromosome 2q13-q14. The present sequence represents a zymogen
CC protein C variant of the invention. Note: The present sequence is not
CC shown in the specification but was created by the indexer using the
CC protein C sequence appearing as AAU93002 and the information in claim 9

XX Sequence 419 AA:

Query Match 99.8%; Score 2319; DB 5; Length 419;

Best Local Similarity 99.8%; Pred. No. 6; 4e-143;

Matches 418; Conservative 1; Mismatches 0; Indels 0; Gaps 0;

QY 1 ANSTFELHSSLSERCEIEICDFEAKETIFQVVDITLAFMSKVVDGQCLVPLEHPCA 60
DB 1 ANSTFELHSSLSERCEIEICDFEAKETIFQVVDITLAFMSKVVDGQCLVPLEHPCA 60
QY 61 SLCCGHTCTIDIGSFSCDCRSQWGRFCORFVSLFNSLNDGCTHYCLEEVMGRRCSC 120
DB 61 SLCCGHTCTIDIGSFSCDCRSQWGRFCORFVSLFNSLNDGCTHYCLEEVMGRRCSC 120
QY 121 APGYKGGDILQCHPAVPCGPRMTRMERSHAKRDTEDQDQVDPRLIDGMTRRG 180
DB 121 APGYKGGDILQCHPAVPCGPRMTRMERSHAKRDTEDQDQVDPRLIDGMTRRG 180
QY 181 SPQVVLDSKKKLAAGAVLHPESVTLTAHCDSESKLTVRAGEVTLRMEKELDLDI 240
DB 181 SPQVVLDSKKKLAAGAVLHPESVTLTAHCDSESKLTVRAGEVTLRMEKELDLDI 240
QY 241 KEVVEHNVSKSTTNDIALHLAQPATLSQTIVPICLPDSGLAEELNQAQOETLVGM 300
DB 241 KEVVEHNVSKSTTNDIALHLAQPATLSQTIVPICLPDSGLAEELNQAQOETLVGM 300
QY 301 GYHSSREKAKRRTFVNFIKIPVPHNCSNMNVSNMTCAGILIGDQACGSDS 360
DB 301 GYHSSREKAKRRTFVNFIKIPVPHNCSNMNVSNMTCAGILIGDQACGSDS 360

QY 361 GGPVWASPHGFWLNGVMSGCGGLANNYGVYTKSVYILDMHGRIRDEAPQKSNAP 419
DB 361 GGPVWASPHGFWLNGVMSGCGGLANNYGVYTKSVYILDMHGRIRDEAPQKSNAP 419

RESULT 28

AA13539
ID AA13539 standard; protein; 461 AA.

AA13539;

25-MAR-2003 (revised)

09-JAN-2003 (revised)

31-OCT-1991 (first entry)

Human Protein C zymogen LIN.

HPC mutant; pro drug; intravascular coagulation; zymogen.

Key Location/Qualifiers

Region 198..199
/label= Lys-Arg dipeptide

EP43875-A.

28-MAR-1991.

22-FEB-1991; 91EP-00301450.

23-FEB-1990; 90US-00484133.

(ELIL) LILLY & CO ELI.

Gerlitz BE, Grinnell BW;

WPI; 1991-254444/35.

Recombinant mutants of human protein C - having aminoacid changes for

increased sensitivity to activation by thrombin and thrombin-

thrombomodulin complex.

Claim 27: Page 37-38; 67pp; English.

CC Protein C Zymogen LIN comprises a signal peptide and propeptide of a
CC gamma-carboxylated secreted protein, the light chain of HPC, a basic
CC dipeptide (i.e. Lys-Arg, but can also be Arg-Lys, Lys-Lys or Arg-Arg) and
CC amino acid residues 200-461 of HPC but with Asp(214) replaced by Asn. The
CC zymogen can be activated in vivo by thrombin alone (even in the presence
CC of calcium) and is more susceptible to activation by
CC thrombin/thrombomodulin than native HPC zymogen. Zymogen LIN can be
CC administered as a pro drug useful in prevention and treatment of diseases
CC involving intravascular coagulation. It can also be given to
CC thrombocytopenic patients with invasive cancers with effective and
CC intensive chemotherapy. See AA13537-40 and AA13623 (updated on 09-JAN-
CC 2003 to add missing OS field.) (updated on 25-MAR-2003 to correct PA
CC field.)

Sequence 461 AA:

Query Match 99.8%; Score 2319; DB 2; Length 461;

Best Local Similarity 99.8%; Pred. No. 7; 1e-143;

Matches 418; Conservative 1; Mismatches 0; Indels 0; Gaps 0;

QY 1 ANSTFELHSSLSERCEIEICDFEAKETIFQVVDITLAFMSKVVDGQCLVPLEHPCA 60
DB 1 ANSTFELHSSLSERCEIEICDFEAKETIFQVVDITLAFMSKVVDGQCLVPLEHPCA 60
QY 43 ANSTFELHSSLSERCEIEICDFEAKETIFQVVDITLAFMSKVVDGQCLVPLEHPCA 102
DB 43 ANSTFELHSSLSERCEIEICDFEAKETIFQVVDITLAFMSKVVDGQCLVPLEHPCA 102
QY 61 SLCCGHTCTIDIGSFSCDCRSQWGRFCORFVSLFNSLNDGCTHYCLEEVMGRRCSC 120
DB 61 SLCCGHTCTIDIGSFSCDCRSQWGRFCORFVSLFNSLNDGCTHYCLEEVMGRRCSC 120
QY 103 GYHSSREKAKRRTFVNFIKIPVPHNCSNMNVSNMTCAGILIGDQACGSDS 152
DB 103 GYHSSREKAKRRTFVNFIKIPVPHNCSNMNVSNMTCAGILIGDQACGSDS 152

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QY 121 APGYKIGDDLQCHPAVPCGPRPKMKRSHLKRTEDEQDVDPRLIDGKXTRRGD 180
DB 163 APGYKIGDDLQCHPAVPCGPRPKMKRSHLKRTEDEQDVDPRLIDGKXTRRGD 222
QY 181 SPMQVLLDSSKKKACGAVLIHPSWVLTAAHQMDSEKSLVRLGEYDLRMEKWEELDLDI 240
DB 223 SPMQVLLDSSKKKACGAVLIHPSWVLTAAHQMDSEKSLVRLGEYDLRMEKWEELDLDI 282
QY 241 KEVFPVHPNYSKSTTDNDIALHLAOPATLSQTIPTCLPDSGLARELNQAQGETLVYTW 300
DB 283 KEVFPVHPNYSKSTTDNDIALHLAOPATLSQTIPTCLPDSGLARELNQAQGETLVYTW 342
QY 301 GYHSSREKAKRNRTPVLANFIKIPVPHNECEVWASNNVSENNLCAGLIGDRQDACEGDS 360
DB 343 GYHSSREKAKRNRTPVLANFIKIPVPHNECEVWASNNVSENNLCAGLIGDRQDACEGDS 402
QY 361 GGPWVASFHGTWPLVGLVSWGCGGLAHNYGYTKVSRYLDMIGHIRDKXAPKSNAP 419
DB 403 GGPWVASFHGTWPLVGLVSWGCGGLAHNYGYTKVSRYLDMIGHIRDKXAPKSNAP 461

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RESULT 29

AAB36896 standard; protein, 419 AA.

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XX AAB36896;
AC 26-FEB-2001 (first entry)
DT 26-FEB-2001 (first entry)
XX
DE Human protein C derivative 3.
XX
KW Protein C; human; vascular occlusive; burn; transplantation;
KW deep vein thrombosis; sickle cell; thalassemia; thrombotic disorders;
KW myocardial infarction; angina; stroke.
XX
XX Homo sapiens.
XX
XX WO200066754-A1.
XX
XX 09-NOV-2000.
XX
XX 13-APR-2000; 2000WO-US008722.
XX
XX 30-APR-1999; 99US-013801P.
XX
XX (ELIL ) LILLY & CO ELI.
XX
XX Gerlitz BE, Jones BB;
XX
XX WPI, 2001-007227/01.
XX
XX N-PSDB; AAC83313.
XX
XX
XX Protein C derivatives, useful for treating vascular occlusive disorder,
XX hypercoagulable state, thrombotic disorder and disease states
XX predisposing thrombosis, comprises specific amino acid substitutions.
XX
XX Claim 4; Page 46-47; 57pp; English.
XX
XX The present invention relates to a human protein C derivative. The
XX protein is useful for treating vascular occlusive disorders,
XX hypercoagulable states such as sepsis, disseminated intravascular
XX coagulation, purpura fulminans, major trauma, major surgery, burns, adult
XX respiratory distress syndrome, transplantation, deep vein thrombosis,
XX heparin-induced thrombocytopenia, sickle cell disease, thalassemia, viral
XX hemorrhagic fever, thrombotic thrombocytopenic purpura, and hemolytic
XX uremic syndrome, and also useful for treating thrombotic disorders and
XX acute coronary syndromes such as myocardial infarction, unstable angina,
XX and stroke. Protein C derivatives with amino acid substitutions result in
XX increased resistance to inactivation by serpins when compared to wild-
XX type activated human protein C. They also have longer half-lives in human
XX blood and hence require either less frequent administration and/or
XX smaller dosage than wild type human protein C for treating disorders

```

XX Sequence 419 AA:

Query Match 99.7%; Score 2318; DB 4; Length 419;
 Best Local Similarity 99.8%; Pred. No. 7,5e-143;
 Matches 418; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

```

QY 1 ANSFLEELHSSLEBRCIEECDFEAKETIPQNDPTLAFWSPKNDGQCVLEPHPCA 60
DB 1 ANSFLEELHSSLEBRCIEECDFEAKETIPQNDPTLAFWSPKNDGQCVLEPHPCA 60
QY 61 SLCCGHTCIDIGSFSCDCRSQWEGRPFQREVSFTLNCSDNGGCTHYCLEWGRRCSC 120
DB 61 SLCCGHTCIDIGSFSCDCRSQWEGRPFQREVSFTLNCSDNGGCTHYCLEWGRRCSC 120
QY 121 APGYKIGDDLQCHPAVPCGPRPKMKRSHLKRTEDEQDVDPRLIDGKXTRRGD 180
DB 121 APGYKIGDDLQCHPAVPCGPRPKMKRSHLKRTEDEQDVDPRLIDGKXTRRGD 180
QY 181 SPMQVLLDSSKKKACGAVLIHPSWVLTAAHQMDSEKSLVRLGEYDLRMEKWEELDLDI 240
DB 181 SPMQVLLDSSKKKACGAVLIHPSWVLTAAHQMDSEKSLVRLGEYDLRMEKWEELDLDI 240
QY 241 KEVFPVHPNYSKSTTDNDIALHLAOPATLSQTIPTCLPDSGLARELNQAQGETLVYTW 300
DB 241 KEVFPVHPNYSKSTTDNDIALHLAOPATLSQTIPTCLPDSGLARELNQAQGETLVYTW 300
QY 301 GYHSSREKAKRNRTPVLANFIKIPVPHNECEVWASNNVSENNLCAGLIGDRQDACEGDS 360
DB 301 GYHSSREKAKRNRTPVLANFIKIPVPHNECEVWASNNVSENNLCAGLIGDRQDACEGDS 360
QY 361 GGPWVASFHGTWPLVGLVSWGCGGLAHNYGYTKVSRYLDMIGHIRDKXAPKSNAP 419
DB 361 GGPWVASFHGTWPLVGLVSWGCGGLAHNYGYTKVSRYLDMIGHIRDKXAPKSNAP 419

```

RESULT 30

AAN99073 standard; protein, 419 AA.

```

XX AAN99073
XX
XX 23-AUG-2002 (first entry)
XX
XX
XX Human Protein C zymogen protein mutant V339S.
XX
XX
XX Homo sapiens.
XX
XX Synthetic.
XX
XX Key Location/Qualifiers
XX 1..155
XX /label=light_chain
XX Peptide 156..157
XX /label=light_chain
XX Protein 158..419
XX /label=Heavy_chain
XX Peptide 158..169
XX /label=Activation_peptide
XX Misc-difference 339
XX /note="Wild-type Val substituted by Ser"
XX
XX WO200232461-A2.
XX
XX 25-APR-2002.
XX
XX 15-OCT-2001; 2001WO-DK006679.

```

XX 18-OCT-2000; 2000DK-00001560.
 PR 18-OCT-2000; 2000US-0242268P.
 PR 21-JUN-2001; 2001DK-00000970.
 PR 21-JUN-2001; 2001US-0300154P.
 XX (MAXY-) MAXYGEN APS.
 PA (MAXY-) MAXYGEN HOLDINGS LTD.
 PI Andersen KV, Pedersen AH, Freskgaard PO;
 XX WPI; 2002-489875/52.
 DR
 XX Novel conjugate useful for treating or preventing septic shock, stroke
 PT and myocardial infarction, comprises non-polypeptide group covalently
 PT attached to protein C polypeptide comprising an attachment group.
 XX
 PS Claim 9; Page: 92pp; English.
 CC The invention relates to a conjugate (I) comprising at least one non-
 CC polypeptide moiety (II) (e.g. an N-glycosyl group) covalently attached to
 CC a protein C polypeptide comprising an amino acid sequence which differs
 CC from that of a parent protein C polypeptide (III) in at least one
 CC introduced and/or at least one removed amino acid residue comprising an
 CC attachment group for the non-polypeptide group (e.g. an N-glycosylation
 CC site). Also included are (1) a variant (IV) of (III) comprising a
 CC substitution in a position (P) where (E) is an amino acid with at least
 CC 25% of its side group exposed to the surface, with the proviso that the
 CC substitution is not Thr245Ser/Ala/His/Lys/Arg/Asn/Asp/Glu/Gly/Gln,
 CC Ty302Ser/Ala/Thr/His/Lys/Arg/Asn/Asp/Glu/Gly/Gln or Phe316Ser/Ala/Thr/
 CC Lys/Lys/Arg/Asn/Asp/Glu/Gly/Gln; (2) a nucleotide sequence (V) encoding
 CC (IV); (3) an expression vector (VI) comprising (V); (4) a host cell (VII)
 CC comprising (V) or (VI); (5) increasing (W2) the functional in vivo half-
 CC life of the serum half-life of a parent protein C polypeptide. The
 CC conjugates, variants and protein C proteins are useful as medicaments,
 CC and in the manufacture of medicaments for the treatment of and
 CC thrombosis/prevention of stroke, myocardial infarction, after venous
 CC shock, emboli e.g. pulmonary emboli, transplantation such as bone marrow
 CC transplantation, burns, pregnancy, major surgery/trauma or adult
 CC respiratory distress syndrome (ARDS). The variant protein C has an
 CC increased resistance to activation by e.g. human plasma and alpha-1
 CC antitrypsin. The conjugates have an increased in vivo half-life,
 CC increased serum half-life, increased resistance to inhibitors, reduced
 CC renal clearance, reduced immunogenicity and/or increased bioavailability.
 CC The conjugate offers a number of advantages over the currently available
 CC APC products, including longer duration between injections, a
 CC administration of less protein, and fewer side effects. Moreover, a
 CC reduced anticoagulant activity is beneficial to reduce the risk of
 CC bleeding while maintaining the antiinflammatory activity of APC
 CC (activated protein C) conjugates. This must be especially important when
 CC the conjugate has an extended plasma life. The gene for protein C is
 CC located on chromosome 2q13-q14. The present sequence represents a zymogen
 CC protein C variant of the invention. Note: The present sequence is not
 CC shown in the specification but was created by the indexer using the
 CC protein C sequence appearing as AU99002 and the information in claim 9
 XX
 SQ Sequence 419 AA:
 Query Match 99.7%; Score 2318; DB 5; Length 419;
 Best Local Similarity 99.8%; Pred. No. 7,5e-143;
 Matches 418; Conservative 0; Mismatches 1; Indels 0; Gaps 0;
 QY 1 ANSLFETLRHSLEECETEECPFEAKKEIPONVDTLTAFMSKHVGDQCLVLEPRCA 60
 DB 1 ANSLFELRRHSLEECETEECPFEAKKEIPONVDTLTAFMSKHVGDQCLVLEPRCA 60
 QY 61 SLCCGHGTCTIDIGISFSCDCRSGWGRFCQREVSFLNCSLDNGGCTHYCLEVGRRCSC 120
 DB 61 SLCCGHGTCTIDIGISFSCDCRSGWGRFCQREVSFLNCSLDNGGCTHYCLEVGRRCSC 120
 QY 121 APGYKGDLLQCHPAVKPFCGRPWKMEKRSKSLKPTLEDQEQYDPRLLDGKMTREGD 180

DB 121 APGYKGDLLQCHPAVKPFCGRPWKMEKRSKSLKPTLEDQEQYDPRLLDGKMTREGD 180
 QY 181 SPWQVNLDSKKKLACGAVLTHPSWVLTAAHCWDSKKLTVLGEYDLRWEKMEILD 240
 DB 181 SPWQVNLDSKKKLACGAVLTHPSWVLTAAHCWDSKKLTVLGEYDLRWEKMEILD 240
 QY 241 KEVFHPNYSKSTTDNDIALHQAQPAQLSQITVPICLFDGSLAEREINQAQETLV 300
 DB 241 KEVFHPNYSKSTTDNDIALHQAQPAQLSQITVPICLFDGSLAEREINQAQETLV 300
 QY 301 GHSSREKARNRRTFVLFKIPVFNPNCSGVMSNMSENMTCAGITLGRDQACBGS 360
 DB 301 GHSSREKARNRRTFVLFKIPVFNPNCSGVMSNMSENMTCAGITLGRDQACBGS 360
 QY 361 GEPNVAHFHGTWFLVGLVSGEGCLLHNYGYTKVSRYLQWIGHIIRDPKAPQSKWAP 419
 DB 361 GEPNVAHFHGTWFLVGLVSGEGCLLHNYGYTKVSRYLQWIGHIIRDPKAPQSKWAP 419

RESULT 31
 AAU99096
 ID AAU99096 standard; Protein: 419 AA.
 AC AAU99096;
 DT 23-AUG-2002 (first entry)
 XX
 DE Human Protein C zymogen protein mutant M338A.
 XX
 KW Human, Protein C; N-glycosylation; APC; activated protein C; zymogen;
 KW serum half-life; chromosome 2q13-q14; stroke; myocardial infarction;
 KW after venous thrombosis; disseminated intravascular coagulation; DIC;
 KW sepsis; septic shock; embolism; pulmonary embolism; burn; pregnancy;
 KW bone marrow transplantation; major surgery; trauma; coagulant;
 KW adult respiratory distress syndrome; alpha-1 antitrypsin; mutant; mutein.
 XX
 OS Homo sapiens.
 OS Synthetic.
 XX
 FH Key location/Qualifiers
 FT Protein 1..155
 FT Peptide /label= light_chain
 FT Peptide 156..157
 FT Protein /label= Lys_Arg_dipeptide
 FT Peptide 158..419
 FT Peptide /label= Heavy_chain
 FT Peptide 158..169
 FT Peptide /label= Activation_peptide
 FT Misc-difference 338
 FT /note= "Wild-type Met substituted by Ala"
 FT
 FT WO200232461-A2.
 PD 25-APR-2002.
 PF 15-OCT-2001; 2001WO-DK000679.
 PR 18-OCT-2000; 2000DK-00001560.
 PR 18-OCT-2000; 2000US-0242268P.
 PR 21-JUN-2001; 2001DK-00000970.
 PR 21-JUN-2001; 2001US-0300154P.
 PA (MAXY-) MAXYGEN APS.
 PA (MAXY-) MAXYGEN HOLDINGS LTD.
 PI Andersen KV, Pedersen AH, Freskgaard PO;
 XX WPI; 2002-489875/52.
 DR
 XX Novel conjugate useful for treating or preventing septic shock, stroke
 PT and myocardial infarction, comprises non-polypeptide group covalently
 PT attached to protein C polypeptide comprising an attachment group.
 XX

PS Example 5; Page; 92pp; English.

CC The invention relates to a conjugate (I) comprising at least one non-
 CC polypeptide moiety (II) (e.g. an N-glycosyl group) covalently attached to
 CC a protein C polypeptide comprising an amino acid sequence which differs
 CC from that of a parent protein C polypeptide (III) in at least one
 CC introduced and/or at least one removed amino acid residue comprising an
 CC attachment group for the non-polypeptide group (e.g. an N-glycosylation
 CC site). Also included are (1) a variant (IV) of (III) comprising at least
 CC substitution in a position (P) where (P) is an amino acid with at least
 CC 25% of its side group exposed to the surface, with the proviso that the
 CC substitution is not Thr245Ser/Ala/His/Lys/Arg/Asn/Asp/Glu/Gly/Gln,
 CC Tyr302Ser/Ala/Thr/His/Lys/Arg/Asn/Asp/Glu/Gly/Gln or Phe316Ser/Ala/Thr/
 CC His/Lys/Arg/Asn/Asp/Glu/Gly/Gln; (2) a nucleotide sequence (V) encoding
 CC (IV); (3) an expression vector (VI) comprising (V); (4) a host cell (VII)
 CC comprising (V) or (VI); (5) increasing (W2) the functional in vivo half-
 CC life or the serum half-life of a parent protein C polypeptide. The
 CC conjugates, variants and protein C proteins are useful as medicaments,
 CC and in the manufacture of medicaments for the treatment (and
 CC diagnosis/prevention) of stroke, myocardial infarction, after venous
 CC thrombosis, disseminated intravascular coagulation (DIC), sepsis, septic
 CC shock, emboli e.g. pulmonary emboli, transplantation such as bone marrow
 CC transplantation, burns, pregnancy, major surgery/trauma or adult
 CC respiratory distress syndrome (ARDS). The variant protein C has an
 CC increased resistance to activation by e.g. human plasma and alpha-1
 CC antitrypsin. The conjugates have an increased in vivo half-life,
 CC increased serum half-life, increased resistance to inhibitors, reduced
 CC renal clearance, reduced immunogenicity and/or increased bioavailability.
 CC The conjugate offers a number of advantages over the currently available
 CC APC products, including longer duration between infections, Moreover, a
 CC administration of less protein, and fewer side effects. Moreover, a
 CC reduced anticoagulant activity is beneficial to reduce the risk of
 CC (activated while maintaining the antiinflammatory activity of APC
 CC (activated protein C) conjugates. This must be especially important when
 CC the conjugate has an extended plasma life. The gene for protein C is
 CC located on chromosome 2q13-q14. The present sequence represents a zymogen
 CC protein C variant of the invention. Note: The present sequence is not
 CC shown in the specification but was created by the indexer using the
 CC protein C sequence appearing as AAU99002 and the information in claim 9
 CC XX
 CC Sequence 419 AA;

Query Match 99.7%; Score 2318; DB 5; Length 419;
 Best Local Similarity 99.8%; Pred. No. 7,5e-143;
 Matches 418; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 ANSFLEIRHSLERECIEICPEEAKETPQVDTITAKSKHVDGDCQVLPHEPCA 60
 DB 1 ANSFLEIRHSLERECIEICPEEAKETPQVDTITAFWSKHVDGDCQVLPHEPCA 60
 QY 61 SLCCGHGTCIDIGSSDCGRSGWEGRPOORHVSFLNCSJLNGGCTHYCLAEVGRSCC 120
 DB 61 SLCCGHGTCIDIGSSDCGRSGWEGRPOORHVSFLNCSJLNGGCTHYCLAEVGRSCC 120
 QY 121 AFGYKLPDILLQCHPAVKPCKRMEKKSRLKRTDQEDQVDPRLIDGKTRRGD 180
 DB 121 AFGYKLPDILLQCHPAVKPCKRMEKKSRLKRTDQEDQVDPRLIDGKTRRGD 180
 QY 181 SFQVYVLLDSKKKLAAGAVLTHPSVLTAAHCHDSKKLLRLAEYTLPRKRWLDDI 240
 DB 181 SFQVYVLLDSKKKLAAGAVLTHPSVLTAAHCHDSKKLLRLAEYTLPRKRWLDDI 240
 QY 241 KEVFHPVYSKTTNDIALLHAQPATISQITVPCLPDGSLAEELNQAQGLITLVGM 300
 DB 241 KEVFHPVYSKTTNDIALLHAQPATISQITVPCLPDGSLAEELNQAQGLITLVGM 300
 QY 301 GHSSREKEAKRNTFYLNFIKIPVPHNECESEMSNAVSENNLCAGLIDRDQCEGDS 360
 DB 301 GHSSREKEAKRNTFYLNFIKIPVPHNECESEMSNAVSENNLCAGLIDRDQCEGDS 360
 QY 361 GGPMTASFTGTWFLVNGVSWEGCGLLAHNYVYVTKYSRYLDMHGHIRDEAKQSMAP 419
 DB 361 GGPMTASFTGTWFLVNGVSWEGCGLLAHNYVYVTKYSRYLDMHGHIRDEAKQSMAP 419

RESULT 32

AAU99032
 ID AAU99032 standard; protein; 419 AA.

AAU99032;

23-APR-2002 (first entry)

Human Protein C zymogen protein mutant S250N/S252T.

Human Protein C; N-glycosylation; APC; activated protein C; zymogen;
 serum half-life; chromosome 2q13-q14; stroke; myocardial infarction;
 after venous thrombosis; disseminated intravascular coagulation; DIC;
 sepsis; septic shock; embolism; pulmonary embolism; burn; pregnancy;
 bone marrow transplantation; major surgery; trauma; ARDS; coagulant;
 adult respiratory distress syndrome; alpha-1 antitrypsin; mutant; mutein.

Homo sapiens.
 Synthetic.

Key Location/Qualifiers

Protein 1..155
 /label= Light chain

Peptide 156..157
 /label= Lys_Arg_dipeptide

Protein 158..419
 /label= Heavy_chain

Peptide 158..169
 /label= Activation_peptide

Misc-difference 250
 /note= "Wild-type Ser substituted by Asn"

Misc-difference 252
 /note= "Wild-type Ser substituted by Thr"

W0200232461-A2.

25-APR-2002.

15-OCT-2001; 2001WO-DK000679.

18-OCT-2000; 2000DK-00001560.

18-OCT-2000; 2000US-0242268P.

21-JUN-2001; 2001DK-00000970.

21-JUN-2001; 2001US-0300154P.

(MAXY-) MAXYGEN APS.

(MAXY-) MAXYGEN HOLDINGS LTD.

Andersen XV, Pedersen AH, Freskgaard PO;

WPI; 2002-489875/52.

Claim 9; Page; 92pp; English.

The invention relates to a conjugate (I) comprising at least one non-
 polypeptide moiety (II) (e.g. an N-glycosyl group) covalently attached to
 a protein C polypeptide comprising an amino acid sequence which differs
 from that of a parent protein C polypeptide (III) in at least one
 introduced and/or at least one removed amino acid residue comprising an
 attachment group for the non-polypeptide group (e.g. an N-glycosylation
 site). Also included are (1) a variant (IV) of (III) comprising a
 substitution in a position (P) where (P) is an amino acid with at least
 25% of its side group exposed to the surface, with the proviso that the
 substitution is not Thr245Ser/Ala/His/Lys/Arg/Asn/Asp/Glu/Gly/Gln,
 Tyr302Ser/Ala/Thr/His/Lys/Arg/Asn/Asp/Glu/Gly/Gln or Phe316Ser/Ala/Thr/
 His/Lys/Arg/Asn/Asp/Glu/Gly/Gln; (2) a nucleotide sequence (V) encoding
 (IV); (3) an expression vector (VI) comprising (V); (4) a host cell (VII)

comprising (V) or (VI); (5) increasing (W2) the functional in vivo half-life or the serum half-life of a parent protein C polypeptide. The conjugates, variants and protein C proteins are useful as medicaments, and in the manufacture of medicaments for the treatment (and diagnosis/prevention) of stroke, myocardial infarction, after venous thrombosis, disseminated intravascular coagulation (DIC), sepsis, septic shock, emboli e.g. pulmonary emboli, transplantation such as bone marrow transplantation, burns, pregnancy, major surgery/trauma or adult respiratory distress syndrome (ARDS). The variant protein C has an increased resistance to activation by e.g. human plasma and alpha-1 antitrypsin. The conjugates have an increased in vivo half-life, increased serum half-life, increased resistance to inhibitors, reduced renal clearance, reduced immunogenicity and/or increased bioavailability. The conjugate offers a number of advantages over the currently available APC products, including longer duration between injections, a administration of less protein, and fewer side effects. Moreover, a reduced anticoagulant activity is beneficial to reduce the risk of bleeding while maintaining the antiinflammatory activity of APC (activated protein C) conjugates. This must be especially important when the conjugate has an extended plasma life. The gene for protein C is located on chromosome 2q13-q14. The present sequence represents a zymogen protein C variant of the invention. Note: The present sequence is not shown in the specification but was created by the indexer using the protein C sequence appearing as AAU99002 and the information in claim 9

Sequence 419 AA:

Query Match 99.7%; Score 2318; DB 5; Length 419;
Best Local Similarity 99.5%; Pred. No. 7.5e-143;
Matches 417; Conservative 2; Mismatches 0; Indels 0; Gaps 0;

QY 1 ANSFLEELRHSSLEBECEIEICDFEBAKEIFQVNDPTLAFWSKHVDGQCLVPLHPHCA 60
DB 1 ANSFLEELRHSSLEBECEIEICDFEBAKEIFQVNDPTLAFWSKHVDGQCLVPLHPHCA 60
QY 61 SLCCGHGTCIDIGISFSCDCRSWEGRFQREVSFLNCSLDNGGCTHYCLEEVMGRCSG 120
DB 61 SLCCGHGTCIDIGISFSCDCRSWEGRFQREVSFLNCSLDNGGCTHYCLEEVMGRCSG 120
QY 121 AFGYKLGDDLLQCHPAVFPQGRPMKMKKRSKSLKPTDQEDQVDPRLDGKMTTRGD 180
DB 121 AFGYKLGDDLLQCHPAVFPQGRPMKMKKRSKSLKPTDQEDQVDPRLDGKMTTRGD 180
QY 181 SPQVVLDSKKKLAGAVLIHPSWLTAHQWDESKLIVLGEYDLRMEKTELDDI 240
DB 181 SPQVVLDSKKKLAGAVLIHPSWLTAHQWDESKLIVLGEYDLRMEKTELDDI 240
QY 241 KEVFAHPNYSKSTTDNDIALHLAQPATLSQITVPICLPDSGLAERELNQAQGETLVYGM 300
DB 241 KEVFAHPNYSKSTTDNDIALHLAQPATLSQITVPICLPDSGLAERELNQAQGETLVYGM 300
QY 301 GHSSPEKAKRNTPTVNFIKIPVPHNECSFEMNMSNMICAGILGDRDADGEGDS 360
DB 301 GHSSPEKAKRNTPTVNFIKIPVPHNECSFEMNMSNMICAGILGDRDADGEGDS 360
QY 361 GGPVVASPHGTWFLVGLVSWGEGCLLNNYGVYTKSRYLWIHGHTIRDEAPQKSNAP 419
DB 361 GGPVVASPHGTWFLVGLVSWGEGCLLNNYGVYTKSRYLWIHGHTIRDEAPQKSNAP 419

RESULT 33
AAR13997
ID AAR13997 standard; protein; 461 AA.

AC AAR13997;
DT 25-MAR-2003 (revised)
DT 01-NOV-1991 (first entry)
DE Human protein C zymogen Q329.
KM HPC; thrombin; mutant.
XX

OS Homo sapiens.
FH Key Location/Qualifiers
FT Peptide 1..442
FT /label= pre-pro
FT /note= "signal peptide and propeptide"
FT 43..197
FT /label= LC
FT /note= "light chain"
FT 198..199
FT /note= "removed to form 2-chain protein C"
FT Region
FT 200..461
FT /label= HC
FT /note= "heavy chain"
FT 200..211
FT /label= AP
FT /note= "activation peptide"
FT 212..461
FT /label= AHC
FT /note= "activated heavy chain"

PN EP443874-A.
PD 28-AUG-1991.
PF 22-FEB-1991; 91EP-00301446.
PR 23-FEB-1990; 90US-00484081.
PR 21-DEC-1990; 90US-00628063.
PA (ELIL) LILLY & CO ELI.
PI Gerltz BE, Grinnell BW;
PI WPI, 1991-254443/35.

Recombinant mutants of human protein C - with altered glycosylation for higher amidolytic and anticoagulant activity when activated.

Claim 9; Page 28; 47pp; English.

The zymogen forms of HPC represented in AAR13582, AAR13584, AAR13585 and AAR13997 have altered glycosylation patterns due to site-directed changes in the native HPC gene encoding the amino acid sequence. When activated, CC they have higher amidolytic and anticoagulant activity than the native form and opt. increased affinity for thrombin. E. coli K12 AG1/PLP-Q329 (NRRL B-18611) was obtained contg. the gene coding for the Asn-371-Gln mutation. pUPC-Q329 was recovered to transform 293 cells which were cultured to produce the zymogen mutant. The mutant had an amidolytic activity of 47 units/mg and anticoagulant activity of 516 units/mg compared to 35 units/mg and 325 units/mg respectively for wild-type CC activated HPC. (Updated on 25-MAR-2003 to correct PA field.)

Sequence 461 AA:

Query Match 99.7%; Score 2318; DB 2; Length 461;
Best Local Similarity 99.8%; Pred. No. 8.2e-143;
Matches 418; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 ANSFLEELRHSSLEBECEIEICDFEBAKEIFQVNDPTLAFWSKHVDGQCLVPLHPHCA 60
DB 43 ANSFLEELRHSSLEBECEIEICDFEBAKEIFQVNDPTLAFWSKHVDGQCLVPLHPHCA 102
QY 61 SLCCGHGTCIDIGISFSCDCRSWEGRFQREVSFLNCSLDNGGCTHYCLEEVMGRCSG 120
DB 103 SLCCGHGTCIDIGISFSCDCRSWEGRFQREVSFLNCSLDNGGCTHYCLEEVMGRCSG 162
QY 121 AFGYKLGDDLLQCHPAVFPQGRPMKMKKRSKSLKPTDQEDQVDPRLDGKMTTRGD 180
DB 163 AFGYKLGDDLLQCHPAVFPQGRPMKMKKRSKSLKPTDQEDQVDPRLDGKMTTRGD 222
QY 181 SPQVVLDSKKKLAGAVLIHPSWLTAHQWDESKLIVLGEYDLRMEKTELDDI 240


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FT      Region      212..461
FT      /label= AHC
FT      /note= "activated heavy chain"
XX
XX      EP443874-A.
XX
XX      28-AUG-1991.
XX
XX      PF      22-FEB-1991; 91EP-00301446.
XX
XX      PR      23-FEB-1990; 90US-00484081.
XX      21-DEC-1990; 90US-00628063.
XX
XX      PA      (EHLI ) LILLY & CO ELL.
XX
XX      PI      Gerlitz BE, Grimmel BW;
XX
XX      DR      WPI; 1991-254443/35.
XX
XX      PT      Recombinant mutants of human protein C - with altered glycosylation for
XX      higher amidolytic and anticoagulant activity when activated.
XX
XX      PS      Claim 7; Page 28; 47p; English.
XX
XX      CC      The zymogen forms of HPC represented in AAR13582, AAR13584, AAR13585 and
XX      AAR13597 have altered glycosylation patterns due to site-directed changes
XX      in the native HPC gene encoding the amino acid sequence. When activated,
XX      CC they have higher amidolytic and anticoagulant activity than the native
XX      CC form and opt. increased affinity for thrombin. E. coli K12 AG1/pUPC-Q313
XX      CC (NRRL B-18610) was obtained contg. the gene coding for the Asn-355-Gln
XX      CC mutation. pUPC-Q313 was recovered to transform 293 cells which were
XX      CC cultured to produce the zymogen mutant. The mutant had an amidolytic
XX      CC activity of 52 units/mg and anticoagulant activity of 627 units/mg
XX      CC compared to 35 units/mg and 325 units/mg respectively for wild-type
XX      CC activated HPC. (Updated on 25-MAR-2003 to correct PA field.)
XX
XX      SQ      Sequence 461 AA;

Query Match      99.7%; Score 2318; DB 2; Length 461;
Best Local Similarity 99.8%; Pred. No. 8,2e-143;
Matches 418; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

1  ANSFLELRHSSLEERCIEICDFEAKKIFQNVDDTLAFWSKRVGDQCLVPLFHPCA 60
43 ANSTLELRHSSLEERCIEICDFEAKKIFQNVDDTLAFWSKRVGDQCLVPLFHPCA 102
61 SLCCGAGTCIDIGISFSCDRCRSGMEGRFCQRRVSFLNCSLDNGGCTHCLAEVGMRRCSG 120
103 SLCCGAGTCIDIGISFSCDRCRSGMEGRFCQRRVSFLNCSLDNGGCTHCLAEVGMRRCSG 162
121 APGYKIGDGLQCHNAVPCGPRMKEKRSKSHKPTEDQDQVDRLLDGMKRRGG 180
163 APGYKIGDGLQCHNAVPCGPRMKEKRSKSHKPTEDQDQVDRLLDGMKRRGG 222
181 SPQGVYLDSSKKLACGAVLHPSVWLTAAHGMDSKKLLVRLGVEDLRREKVELDLDI 240
223 SPQGVYLDSSKKLACGAVLHPSVWLTAAHGMDSKKLLVRLGVEDLRREKVELDLDI 282
241 KEVFEHFNYSKSTTNDIALIHLAOPATISQTTIVICLPDSGLAEELNQGQGTLYTGA 300
283 KEVFEHFNYSKSTTNDIALIHLAOPATISQTTIVICLPDSGLAEELNQGQGTLYTGA 342
301 GYHSRREKAKRRTFVNLFKIPVPHNECEWNSNVSBNMLCAGIIGRQACRGDS 360
343 GYHSRREKAKRRTFVNLFKIPVPHNECEWNSNVSBNMLCAGIIGRQACRGDS 402
361 GGPVVASFHGTWFLVGLVSWGCGGLHNVGYTVVSVRYIDWIGHIRDKAPQKSNAP 419
403 GGPVVASFHGTWFLVGLVSWGCGGLHNVGYTVVSVRYIDWIGHIRDKAPQKSNAP 461

```

```

ID      AAR13584 standard; protein; 461 AA.
AC      AAR13584;
XX
XX      25-MAR-2003 (revised)
XX      01-NOV-1991 (first entry)
XX
XX      DE      Human protein C zymogen Q248.
XX      XX      HPC; thrombin; mutant.
XX
XX      OS      Homo sapiens.
XX
XX      EH      Key
XX      FT      Peptide
XX      FT      1..42
XX      FT      /label= pre-pro
XX      FT      /note= "signal peptide and propeptide"
XX      FT      43..197
XX      FT      /label= LC
XX      FT      /note= "light chain"
XX      FT      198..199
XX      FT      /note= "removed to form 2-chain protein C"
XX      FT      Region
XX      FT      200..461
XX      FT      /label= HC
XX      FT      /note= "heavy chain"
XX      FT      200..211
XX      FT      /label= AP
XX      FT      /note= "activation peptide"
XX      FT      212..461
XX      FT      /label= AHC
XX      FT      /note= "activated heavy chain"

EP443874-A.
XX
XX      PD      28-AUG-1991.
XX
XX      PF      22-FEB-1991; 91EP-00301446.
XX
XX      PR      23-FEB-1990; 90US-00484081.
XX      21-DEC-1990; 90US-00628063.
XX
XX      PA      (EHLI ) LILLY & CO ELL.
XX
XX      PI      Gerlitz BE, Grimmel BW;
XX
XX      PS      Claim 5; Page 28; 47p; English.
XX
XX      CC      The zymogen forms of HPC represented in AAR13582, AAR13584, AAR13585 and
XX      AAR13597 have altered glycosylation patterns due to site-directed changes
XX      in the native HPC gene encoding the amino acid sequence. When activated,
XX      CC they have higher amidolytic and anticoagulant activity than the native
XX      CC form and opt. increased affinity for thrombin. E. coli K12 AG1/pUPC-Q248
XX      CC (NRRL B-18609) was obtained contg. the gene coding for the Asn-248-Gln
XX      CC mutation. pUPC-Q248 was recovered to transform 293 cells which were
XX      CC cultured to produce the zymogen mutant. The mutant had an amidolytic
XX      CC activity of 63 units/mg and anticoagulant activity of 669 units/mg
XX      CC compared to 35 units/mg and 325 units/mg respectively for wild-type
XX      CC activated HPC. (Updated on 25-MAR-2003 to correct PA field.)
XX
XX      SQ      Sequence 461 AA;

Query Match      99.7%; Score 2318; DB 2; Length 461;
Best Local Similarity 99.8%; Pred. No. 8,2e-143;
Matches 418; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

1  ANSFLELRHSSLEERCIEICDFEAKKIFQNVDDTLAFWSKRVGDQCLVPLFHPCA 60
43 ANSTLELRHSSLEERCIEICDFEAKKIFQNVDDTLAFWSKRVGDQCLVPLFHPCA 102

```

RESULT 36
AAR13584

FT Protein 1..155
 FT Peptide /label= Light_chain
 FT Peptide 156..157
 FT Protein /label= Lys_Arg_dipeptide
 FT Peptide 158..169
 FT Peptide /label= Heavy_chain
 FT Peptide 158..169
 FT Misc-difference 303
 FT /note= "Wild-type His substituted by Asn"
 XX
 XX WO200232461-A2.
 XX
 XX 25-APR-2002.
 XX
 XX 15-OCT-2001; 2001WO-DK00679.
 XX
 XX 18-OCT-2000; 2000DK-00001560.
 XX 18-OCT-2000; 2000US-024268P.
 XX 21-JUN-2001; 2001DK-00000970.
 XX 21-JUN-2001; 2001US-0300154P.
 XX
 XX (MAXY-) MAXYGEN APS.
 XX (MAXY-) MAXYGEN HOLDINGS LTD.
 XX
 XX Andersen XV, Pedersen AH, Freskgard PO;
 XX
 XX WPI: 2002-489875/52.
 XX
 XX Novel conjugate useful for treating or preventing septic shock, stroke
 XX and myocardial infarction, comprises non-polypeptide group covalently
 XX attached to protein C polypeptide comprising an attachment group.
 XX
 XX Claim 9; Page; 92pp; English.
 XX
 XX The invention relates to a conjugate (I) comprising at least one non-
 XX polypeptide moiety (II) (e.g. an N-glycosyl group) covalently attached to
 XX a protein C polypeptide comprising an amino acid sequence which differs
 XX from that of a parent protein C polypeptide (III) in at least one
 XX introduced and/or at least one removed amino acid residue comprising an
 XX attachment group for the non-polypeptide group (e.g. an N-glycosylation
 XX site). Also included are (1) a variant (IV) of (III) comprising a
 XX substitution in a position (P) where (P) is an amino acid with at least
 XX 25% of its side group exposed to the surface, with the proviso that the
 XX substitution is not Thr245Ser/Ala/His/Lys/Arg/Asn/Asp/Glu/Gly/Gln/
 XX Tyr02Ser/Ala/Thr/His/Lys/Arg/Asn/Asp/Glu/Gly/Gln or Phe31Ser/Ala/Thr/
 XX His/Lys/Arg/Asn/Asp/Glu/Gly/Gln; (2) a nucleotide sequence (V) encoding
 XX (IV); (3) an expression vector (VI) comprising (V); (4) a host cell (VII)
 XX comprising (V) or (VI); (5) increasing (W2) the functional in vivo half-
 XX life of the serum half-life of a parent protein C polypeptide. The
 XX conjugates, variants and protein C proteins are useful as medicaments,
 XX and in the manufacture of medicaments for the treatment (and
 XX diagnosis/prevention) of stroke, myocardial infarction, after venous
 XX thrombosis, disseminated intravascular coagulation (DIC), sepsis, septic
 XX shock, emboli e.g. pulmonary emboli, transplantation such as bone marrow
 XX transplantation, burns, pregnancy, major surgery/trauma or adult
 XX respiratory distress syndrome (ARDS). The variant protein C has an
 XX increased resistance to activation by e.g. human plasma and alpha-1
 XX antitrypsin. The conjugates have an increased in vivo half-life, reduced
 XX renal clearance, reduced immunogenicity and/or increased bioavailability.
 XX The conjugate offers a number of advantages over the currently available
 XX APC products, including longer duration between injections, more
 XX administration of less protein, and fewer side effects. Moreover, a
 XX reduced anticoagulant activity is beneficial to reduce the risk of
 XX bleeding while maintaining the antiinflammatory activity of APC
 XX (activated protein C) conjugates. This must be especially important when
 XX the conjugate has an extended plasma life. The gene for protein C is
 XX located on chromosome 2q13-q14. The present sequence represents a zymogen
 XX protein C variant of the invention. Note: The present sequence is not
 XX shown in the specification but was created by the indexer using the
 XX protein C sequence appearing as AAU99002 and the information in claim 9

SQ Sequence 419 AA;
 Query Match 99.7%; Score 2317; DB 5; Length 419;
 Best Local Similarity 99.8%; Pred. No. 8.7e-143;
 Matches 418; Conservative 1; Mismatches 0; Indels 0; Gaps 0;
 QY 1 ANSPLEIRHSSLEBCEIEICDFEAKEIFQVNDTLAFMSKVEDGQCLVPLEHPCA 60
 DB 1 ANSFLEIRHSSLEBCEIEICDFEAKEIFQVNDTLAFMSKVEDGQCLVPLEHPCA 60
 QY 61 SLCCGHGTCIDGIGSFSCDCRSAGMGRCFQREYSPINCLNDGGCTHYCLEFGMRCSG 120
 DB 61 SLCCGHGTCIDGIGSFSCDCRSAGMGRCFQREYSPINCLNDGGCTHYCLEFGMRCSG 120
 QY 121 APGYKGDLDLQCHPAKPCGRPMKREKRSKSLKEDTEDQDQVPRLLIDKMTRRGD 180
 DB 121 APGYKGDLDLQCHPAKPCGRPMKREKRSKSLKEDTEDQDQVPRLLIDKMTRRGD 180
 QY 181 SPQVVLDSKKKLACGAVLIHPSWVLTAAHQMDESKLVLGLGYDLRWEKWEIDLI 240
 DB 181 SPQVVLDSKKKLACGAVLIHPSWVLTAAHQMDESKLVLGLGYDLRWEKWEIDLI 240
 QY 241 KEVFAHNTKSTTDNDIALHLAOPATLSOTVPTCLDPSGLAREHNOAGETLVGM 300
 DB 241 KEVFAHNTKSTTDNDIALHLAOPATLSOTVPTCLDPSGLAREHNOAGETLVGM 300
 QY 301 GYSSREKEAKRNTFTVNFYIKIPVPHNECEVMSNMVSENNLCAGILGDRDACBGS 360
 DB 301 GYSSREKEAKRNTFTVNFYIKIPVPHNECEVMSNMVSENNLCAGILGDRDACBGS 360
 QY 361 GGPWVASFQWTFVLGWSVSGCGILNNYGYTKYSRIYLDIHGHIDKAPKSNAP 419
 DB 361 GGPWVASFQWTFVLGWSVSGCGILNNYGYTKYSRIYLDIHGHIDKAPKSNAP 419
 RESULT 39
 AAU99069
 ID AAU99069 standard; protein; 419 AA.
 XX
 XX AAU99069;
 XX
 XX 23-AUG-2002 (first entry)
 XX
 XX Human Protein C zymogen protein mutant V334N.
 XX
 XX Human; Protein C, N-glycosylation; APC; activated protein C; zymogen;
 XX serum half-life; chromosome 2q13-q14; stroke; myocardial infarction;
 XX after venous thrombosis; disseminated intravascular coagulation; DIC;
 XX sepsis; septic shock; embolism; pulmonary embolism; burn; pregnancy;
 XX bone marrow transplantation; major surgery; trauma; ARDS; coagulant;
 XX adult respiratory distress syndrome; alpha-1 antitrypsin; mutant; mutein.
 XX
 XX Homo sapiens.
 XX Synthetic.
 CS
 FH Key Location/Qualifiers
 FT Protein 1..155
 FT Peptide /label= Light_chain
 FT Peptide 156..157
 FT Protein /label= Lys_Arg_dipeptide
 FT Peptide 158..169
 FT Peptide /label= Heavy_chain
 FT Misc-difference 334
 FT /note= "Wild-type Val substituted by Asn"
 XX
 XX WO200232461-A2.
 XX
 XX 25-APR-2002.
 XX
 XX 15-OCT-2001; 2001WO-DK00679.
 XX

PR 18-OCT-2000; 2000DK-00001560.
 PR 18-OCT-2000; 2000US-0242268P.
 PR 21-JUN-2001; 2001DK-00000370.
 PR 21-JUN-2001; 2001US-0300154P.
 XX
 PA (MAXY-) MAXYGEN APS.
 PA (MAXY-) MAXYGEN HOLDINGS LTD.
 PI Andersen KV, Pedersen AH, Freskgaard PO;
 PI WPI; 2002-489875/52.
 DR
 XX
 PT Novel conjugate useful for treating or preventing septic shock, stroke
 PT and myocardial infarction, comprises non-polypeptide group covalently
 PT attached to protein C polypeptide comprising an attachment group.
 XX
 PS Claim 9; Page; 92pp; English.
 XX
 CC The invention relates to a conjugate (I) comprising at least one non-
 CC polypeptide moiety (II) (e.g. an N-glycosyl group) covalently attached to
 CC a protein C polypeptide comprising an amino acid sequence which differs
 CC from that of a parent protein C polypeptide (III) in at least one
 CC introduced and/or at least one removed amino acid residue comprising an
 CC attachment group for the non-polypeptide group (e.g. an N-glycosylation
 CC site). Also included are (1) a variant (IV) of (III) comprising a
 CC substitution in a position (p) where (P) is an amino acid with at least
 CC 23% of its side group exposed to the surface, with the proviso that the
 CC substitution is not Thr245Ser/Ala/His/Lys/Arg/Asn/Asp/Glu/Gly/Gln/
 CC Tyr302Ser/Ala/Thr/His/Lys/Arg/Asn/Asp/Glu/Gly/Gln or Phe316Ser/Ala/Thr/
 CC His/Lys/Arg/Asn/Asp/Glu/Gly/Gln; (2) a nucleotide sequence (V) encoding
 CC (IV); (3) an expression vector (VI) comprising (V); (4) a host cell (VII)
 CC comprising (V) or (VI); (5) increasing (M2) the functional in vivo half-
 CC life or the serum half-life of a parent protein C polypeptide. The
 CC conjugates, variants and protein C proteins are useful as medicaments,
 CC and in the manufacture of medicaments for the treatment (and
 CC diagnosis/prevention) of stroke, myocardial infarction, DIC, sepsis, septic
 CC shock, emboli e.g. pulmonary emboli, transplantation such as bone marrow
 CC transplantation, burns, pregnancy, major surgery/trauma or adult
 CC respiratory distress syndrome (ARDS). The variant protein C has an
 CC increased resistance to activation by e.g. human plasma and alpha-1
 CC antitrypsin. The conjugates have an increased in vivo half-life,
 CC increased serum half-life, increased resistance to inhibitors, reduced
 CC renal clearance, reduced immunogenicity and/or increased bioavailability.
 CC The conjugate offers a number of advantages over the currently available
 CC APC products, including longer duration between injections, a
 CC administration of less protein, and fewer side effects. Moreover, a
 CC reduced anticoagulant activity is beneficial to reduce the risk of
 CC bleeding while maintaining the antiinflammatory activity of APC
 CC (activated protein C) conjugates. This must be especially important when
 CC the conjugate has an extended plasma life. The gene for protein C is
 CC located on chromosome 2q13-q14. The present sequence represents a zymogen
 CC protein C variant of the invention. Note: The present sequence is not
 CC shown in the specification but was created by the indexer using the
 CC protein C sequence appearing as AAU99002 and the information in claim 9
 XX
 SQ Sequence 419 AA;
 Query Match 99.7%; Score 2317; DB 5; Length 419;
 Best Local Similarity 99.8%; Pred. No. 8.7e-143;
 Matches 418; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 181 SPQVYLLDSKKKKACGAVLTHPSWVLTAAHOMDESKKLLVRLGEYDLPKWEKELDLDI 240
 DB 181 SPQVYLLDSKKKKACGAVLTHPSWVLTAAHOMDESKKLLVRLGEYDLPKWEKELDLDI 240
 QY 241 KEVFAHPNYSKSTTNDIALHQAQATLSQITVPICLPDSGLAEERINMQGQETLVYGM 300
 DB 241 KEVFAHPNYSKSTTNDIALHQAQATLSQITVPICLPDSGLAEERINMQGQETLVYGM 300
 QY 301 GHSSREKAKRRKRFVNFILKIPVPHNECSFNNSNNVSNMLCAGLIGRQACEDS 360
 DB 301 GHSSREKAKRRKRFVNFILKIPVPHNECSFNNSNNVSNMLCAGLIGRQACEDS 360
 QY 361 GSPVWASFEHGTWFLVGLYSMGEGCGLLHMYGYTVYSRYLDMTHGTRDKAPQKSWAP 419
 DB 361 GSPVWASFEHGTWFLVGLYSMGEGCGLLHMYGYTVYSRYLDMTHGTRDKAPQKSWAP 419
 RESULT 40
 AAU99036
 ID AAU99036 standard; protein: 419 AA.
 XX
 AC AAU99036;
 XX
 AC 23-AUG-2002 (first entry)
 DT
 XX
 DE Human Protein C zymogen protein mutant S252N/T254S.
 XX
 KW Human; Protein C; N-glycosylation; APC; activated protein C; zymogen;
 KW serum half-life; chromosome 2q13-q14; stroke; myocardial infarction;
 KW after venous thrombosis; disseminated intravascular coagulation; DIC;
 KW sepsis; septic shock; embolism; pulmonary embolism; burn; pregnancy;
 KW bone marrow transplantation; major surgery; trauma; ARDS; coagulant;
 KW adult respiratory distress syndrome; alpha-1 antitrypsin; mutant; mutein.
 XX
 OS Homo sapiens.
 OS Synthetic.
 XX
 FH Key Location/Qualifiers
 FT 1..155 /label= Light_chain
 FT 156..157 /label= Lys_Arg_dipeptide
 FT 158..419 /label= Heavy_chain
 FT Protein /label= Heavy_chain
 FT 158..169 /label= Activation_peptide
 FT Peptide
 FT Misc-difference 252 /note= "Wild-type Ser substituted by Asn"
 FT FT Misc-difference 254 /note= "Wild-type Thr substituted by Ser"
 PN MO200232461-A2.
 PD 25-APR-2002.
 XX
 PF 15-OCT-2001; 2001WO-DK000679.
 XX
 PR 18-OCT-2000; 2000DK-00001560.
 PR 18-OCT-2000; 2000US-0242268P.
 PR 21-JUN-2001; 2001DK-00000370.
 PR 21-JUN-2001; 2001US-0300154P.
 XX
 PA (MAXY-) MAXYGEN APS.
 PA (MAXY-) MAXYGEN HOLDINGS LTD.
 PI Andersen KV, Pedersen AH, Freskgaard PO;
 PI WPI; 2002-489875/52.
 DR
 XX
 PT Novel conjugate useful for treating or preventing septic shock, stroke
 PT and myocardial infarction, comprises non-polypeptide group covalently
 PT attached to protein C polypeptide comprising an attachment group.

The invention relates to a conjugate (I) comprising at least one non-polypeptide moiety (II) (e.g. an N-glycosyl group) covalently attached to a protein C polypeptide comprising an amino acid sequence which differs from that of a parent protein C polypeptide (III) in at least one introduced acid/ or at least one removed amino acid residue comprising an attachment group for the non-polypeptide group (e.g. an N-glycosylation site). Also included are (1) a variant (IV) of (III) comprising a substitution in a position (p) where (p) is an amino acid with at least 23% of its side group exposed to the surface, with the proviso that the substitution is not Thr245Ser/Ala/His/Lys/Arg/Asn/Asp/Glu/Gly/Gln, Tyr302Ser/Ala/Thr/His/Lys/Arg/Asn/Asp/Glu/Gly/Gln or Phe316Ser/Ala/Thr/Lys/Lys/Arg/Asn/Asp/Glu/Gly/Gln; (2) a nucleotide sequence (V) encoding (IV); (3) an expression vector (VI) comprising (V); (4) a host cell (VII) comprising (V) or (VI); (5) increasing (M2) the functional in vivo half-life or the serum half-life of a parent protein C polypeptide. The conjugates, variants and protein C proteins are useful as medicaments, and in the manufacture of medicaments for the treatment (and diagnosis/prevention) of stroke, myocardial infarction, after venous thrombosis, disseminated intravascular coagulation (DIC), sepsis, septic shock, emboli e.g. pulmonary emboli, transplantation such as bone marrow transplantation, burns, pregnancy, major surgery/trauma or adult respiratory distress syndrome (ARDS). The variant protein C has an increased resistance to activation by e.g. human plasma and alpha-1 antitrypsin. The conjugates have an increased in vivo half-life, increased serum half-life, increased resistance to inhibitors, reduced renal clearance, reduced immunogenicity and/or increased bioavailability. The conjugate offers a number of advantages over the currently available APC products, including longer duration between infusions, Moreover, administration of less protein, and fewer side effects. Moreover, a reduced anticoagulant activity is beneficial to reduce the risk of bleeding while maintaining the antiinflammatory activity of APC (activated protein C) conjugates. This must be especially important when the conjugate has an extended plasma life. The gene for protein C is located on chromosome 2q13-q14. The present sequence represents a zymogen protein C variant of the invention. Note: The present sequence is not shown in the specification but was created by the indexer using the protein C sequence appearing as AA095002 and the information in claim 9

Query Match	99.7%	Score 2317	DB 5	Length 419
Best Local Similarity	99.5%	Prod. No. 87e-143		
Matches 417	Conservative	2	Mismatches 0	Indels 0
			Gaps	0
QY	1	ANSFLEELRHSLSRECEIERICDFEAKETIQNVDDTLAFLWSKKVDDQGLVPLERPCA	60	
Db	1	ANSFLEELRHSLSRECEIEECDFEAKETIQNVDDTLAFLWSKKVDDQGLVPLERPCA	60	
QY	61	SLCCGHTCTIDIGSFSFCDCRSGMEGRFCQREYFLNCSLNDGCTHYCLEEYGRASC	120	
Db	61	SLCCGHTCTIDIGSFSFCDCRSGMEGRFCQREYFLNCSLNDGGCTHYCLEEYGRASC	120	
QY	121	ABGYXLDGDDLQCPHAYVPCGPRPMEMKRSLSLKRDTEDEQDVDPRLIGKTRRGD	180	
Db	121	ABGYXLDGDDLQCPHAYVPCGPRPMEMKRSLSLKRDTEDEQDVDPRLIGKTRRGD	180	
QY	181	SPWQVTLJDSKKLACGAVLHPSWVLTAAHOMBSKLYLHGSYLRPMEXMWLDDI	240	
Db	181	SPWQVTLJDSKKLACGAVLHPSWVLTAAHOMBSKLYLHGSYLRPMEXMWLDDI	240	
QY	241	KPVFHPHYSKSTTNDIALHIAOPATLSQTYIPLPDSGLARELNDAGETLYTGM	300	
Db	241	KPVFHPHYSKSTTNDIALHIAOPATLSQTYIPLPDSGLARELNDAGETLYTGM	300	
QY	301	GYSHSREKEAKRRTFVNLFIKIPVPHNECEYSNMVSENNLCAGILLRQDAEGDS	360	
Db	301	GYSHSREKEAKRRTFVNLFIKIPVPHNECEYSNMVSENNLCAGILLRQDAEGDS	360	
QY	361	GGPMYASHFGTWELVGLYSMEGGILLNYGYTAKVSRITDILHGHIDEAKQSKAP	419	
Db	361	GGPMYASHFGTWELVGLYSMEGGILLNYGYTAKVSRITDILHGHIDEAKQSKAP	419	

RESULT 41	
AAU99075	
ID	AAU99075 standard; protein; 419 AA.
XX	
AC	AAU99075;
DT	23-AUG-2002 (first entry)
XX	
DE	Human Protein C zymogen protein mutant M338N.

KM	Human; Protein C; N-glycosylation; APC; activated protein C; zymogen;
KM	serum half-life; Chromosome 2q13-q14; stroke; myocardial infarction;
KM	after venous thrombosis; disseminated intravascular coagulation; DIC;
KM	septic shock; emolism; pulmonary embolism; burn; pregnancy;
KM	bone marrow transplantation; major surgery; trauma; ARDS; coagulant;
KM	adult respiratory distress syndrome; alpha-1 antitrypsin; mutant; mucin.
XX	
XS	Homo sapiens.
OS	Synthetic.
XX	
Key	Location/qualifiers
FT	Protein
FT	1..155
FT	/label= light_chain
FT	Peptide
FT	156..157
FT	/label= Lys_Arg_dipeptide
FT	Protein
FT	158..419
FT	/label= Heavy_chain
FT	Peptide
FT	158..169
FT	/label= Activation_peptide
FT	Misc-difference
FT	338
FT	/note= "Wild-type Met substituted by Asn"
PN	WO200232461-A2.
XX	
PD	25-APR.-2002.
XX	
PE	15-OCT-2001; 2001MO-DK000679.
XX	
PR	18-OCT-2000; 2000DK-00001560.
PR	18-OCT-2000; 2000US-024268P.
PR	21-JUN-2001; 2001DR-000003970.
PR	21-JUN-2001; 2001US-0300154P.
XX	
PA	(MAXY-) MAXGEN APS.
PA	(MAXY-) MAXGEN HOLDINGS LTD.
PI	Andersen KV, Pedersen AH, Friesgaard PO;
XX	
DR	WP1; 2002-489875/52.
PT	Novel conjugate useful for treating or preventing septic shock, stroke
PT	and myocardial infarction, comprises non-polypeptide group covalently
PT	attached to protein C polypeptide comprising an attachment group.
XX	
PS	Claim 9; Page; 92pp; English.
XX	
CC	The invention relates to a conjugate (I) comprising at least one non-
CC	polypeptide moiety (II) (e.g. an N-glycosyl group) covalently attached to
CC	a protein C polypeptide comprising an amino acid sequence which differs
CC	from that of a parent protein C polypeptide (III) in at least one
CC	introduced and/or at least one removed amino acid residue comprising an
CC	attachment group for the non-polypeptide group (e.g. an N-glycosylation
CC	site). Also included are (1) a variant (IV) of (III) comprising a
CC	substitution in a position (P) where (P) is an amino acid with at least
CC	25% of its side group exposed to the surface, with the proviso that the
CC	substitution is not Thrs245Ser/Ala/His/Lys/Arg/Asn/Asp/Glu/Gly/Gln or Phe156Ser/Ala/Thr/
CC	Tyr202Ser/Ala/Thr/His/Lys/Arg/Asn/Asp/Glu/Gly/Gln or Phe156Ser/Ala/Thr/
CC	His/Lys/Arg/Asn/Asp/Glu/Gly/Gln; (2) a nucleotide sequence (V) encoding
CC	(IV); (3) an expression vector (VI) comprising (V); (4) a host cell (VII)
CC	comprising (V) or (VI); (5) increasing (W2) the functional in vivo half-

Query Match	99.78;	Score 2317;	DB 5;	length 419;
Best Local Similarity	99.88;	Pred. No. 8.7e-143;		
Matches 419;	Conservative	0;	Mismatches 1;	Indels 0;
			Gaps	0;

```

0Y  ANSLJELEHSSLEBCEBCEICEOFEAEIIFOVNDITLA FMSKVADQCLVLEHPCA 60
Db  1 ANSLJELEHSSLEBCEBCEICEOFEAEIIFOVNDITLA FMSKVADQCLVLEHPCA 60
0Y  61 SLCCGHGTCDIDIGSFSODCRSGWEGRQCOREVSLNCSLDNGGCTHYCLEBVGWRCSG 120
Db  61 SLCCGHGTCDIDIGSFSODCRSGWEGRQCOREVSLNCSLDNGGCTHYCLEBVGWRCSG 120
0Y  121 APGYKLGDDLLQCHPAYKFCQGRPKAKREKKRSHLKRDLEQEOVDVPRLLDGKWTERRD 180
Db  121 APGYKLGDDLLQCHPAYKFCQGRPKAKREKKRSHLKRDLEQEOVDVPRLLDGKWTERRD 180
0Y  181 SPWQVVLNDSKKKLACGAVLIHPSAVLIRAHQWDESKLVLRLGEYDLRRMKWEFLDLDI 240
Db  181 SPWQVVLNDSKKKLACGAVLIHPSAVLIRAHQWDESKLVLRLGEYDLRRMKWEFLDLDI 240
0Y  241 KEVVEHDNYSKSTYNDNDIALHLHAQPATLSQTIYPLCLPDSGLARELNDAQGETLVYGM 300
Db  241 KEVVEHDNYSKSTYNDNDIALHLHAQPATLSQTIYPLCLPDSGLARELNDAQGETLVYGM 300
0Y  301 GHSSREKEAKRRTFVNLNFKLPVYPHNESSEVMSNMSEMLCAGLLEDPQDACEBDS 360
Db  301 GHSSREKEAKRRTFVNLNFKLPVYPHNESSEVMSNMSEMLCAGLLEDPQDACEBDS 360
0Y  361 GGPWYVAFHQTWLVGLVMSQEGGLNHYGYKVSRTLDMIHSHIRDEKAFQKSNAP 419
Db  361 GGPWYVAFHQTWLVGLVMSQEGGLNHYGYKVSRTLDMIHSHIRDEKAFQKSNAP 419

```

RESULT 42
AAU99043
ID AAU99043 standard; protein; 419 AA.
XX
AC AAU99043;
XX
DT 23-AUG-2002 (first entry)
XX
DE Human Protein C zymogen protein mutant I296N.
XX
KW Human; Protein C; N-glycosylation; APC; activated protein C; zymogen;
KW serum half-life; chromosome 2q13-q14; stroke; myocardial infarction;
KW after venous thrombosis; disseminated intravascular coagulation; DIC;
KW sepsis; septic shock; embolism; pulmonary embolism; burn; pregnancy;
KW

KM	bone marrow transplantation; major surgery; trauma; ARDS; coagulant;
XN	adult respiratory distress syndrome; alpha-1 antitrypsin; mutant; mteuin.
XX	
OS	Homo sapiens.
CS	Synthetic.
XX	
FH	Key
FT	Protein
FT	/label= Light_chain
FT	Peptide
FT	/label= Lys_Arg_dipeptide
FT	Protein
FT	/label= Heavy_chain
FT	Peptide
FT	/label= Activation_peptide
FT	Misc-difference
FT	/note= "Wild-type Leu substituted by Asn"
XX	
PW	N02000232461-A2.
ED	25-APR-2002.
PF	15-OCT-2001; 2001WO-DK00679.
XX	
PR	18-OCT-2000; 2000DK-00001560-
PR	18-OCT-2000; 2000US-024232&BP.
PR	21-JUN-2001; 2001DK-0000370.
PR	21-JUN-2001; 2001US-0300154P.
XX	
PA	[MAXY-] MAXYGEN AFS.
XX	[MAXX-] MAXYGEN HOLDINGS LTD.
PI	Andersen KV, Pedersen AH, Friesgaard PO;
DR	WFI; 2002-489875/52.
XX	
PT	Newel conjugate useful for treating or preventing septic shock, stroke
PT	and myocardial infarction, comprises non-polypeptide group covalently
PS	attached to protein C polypeptide comprising an attachment group.
XX	
PS	Claim 9; Page; 92pp; English.
CC	The invention relates to a conjugate (I) comprising at least one non-
CC	-polypeptide moiety (II) (e.g. an N-glycosyl group) covalently attached to
CC	a protein C polypeptide comprising an amino acid sequence which differs
CC	from that of a parent protein C polypeptide (III) in at least one
CC	introduced and/or at least one removed amino acid residue comprising an
CC	attachment group for the non-polypeptide group (e.g. an N-glycosylation
CC	site). Also included are (1) a variant (IV) of (III) comprising a
CC	substitution in a position (p) where (p) is an amino acid with at least
CC	25% of its side group exposed to the surface, with the proviso that the
CC	substitution is not Thr245Ser/Ala/His/Lys/Arg/Asn/Asp/Glu/Gly/Gln,
CC	Tyr302Ser/Ala/TyrHis/Lys/Arg/Asn/Asp/Glu/Gly/Gln or Phe31Ser/Ala/Tyr/ His/Lys/Arg/Asn/Asp/Glu/Gly/Gln; (2) a nucleotide sequence (V) encoding (IV); (3) an expression vector (VI) comprising (IV); (4) a host cell (VII)
CC	comprising (V) or (VI); (5) increasing (M2) the functional in vivo half-
CC	-life or the serum half-life of a parent protein C polypeptide. The
CC	conjugates, variants and protein C proteins are useful as medicaments, and in the manufacture of medicaments for the treatment and
CC	diagnosis/prevention) of stroke, myocardial infarction, after venous thrombosis, disseminated intravascular coagulation (DIC), sepsis, septic
CC	shock, emboli e.g. pulmonary emboli, transplantation such as bone marrow transplantation, burns, pregnancy, major surgery/trauma or adult
CC	respiratory distress syndrome (ARDS). The variant protein C has an
CC	increased resistance to activation by e.g. human plasma and alpha-1
CC	antitrypsin. The conjugates have an increased in vivo half-life,
CC	increased serum half-life, increased resistant to inhibitors, reduced
CC	renal clearance, reduced immunogenicity and/or increased bioavailability
CC	APC products, including longer duration between injections,
CC	administration of less protein, and fewer side effects. Moreover, a
CC	reduced anticoagulant activity is beneficial to reduce the risk of
CC	bleeding while maintaining the anti-inflammatory activity of APC

CC (activated protein C) conjugates. This must be especially important when
 CC the conjugate has an extended plasma life. The gene for protein C is
 CC located on chromosome 2q13-q14. The present sequence represents a zymogen
 CC protein C variant of the invention. Note: The present sequence is not
 CC shown in the specification but was created by the indexer using the
 CC protein C sequence appearing as AAU99002 and the information in claim 9
 XX
 SQ Sequence 419 AA;

Query Match 99.7%; Score 2317; DB 5; Length 419;

Best Local Similarity 99.8%; Pred. No. 8.7e-143;
 Matches 418; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 ANSFLELRHSLSREIRIEICDFEAKELFQVNDPTLAFWSKVDQCLVPLEHPCA 60
 1 ANSFLELRHSLSREIRIEICDFEAKELFQVNDPTLAFWSKVDQCLVPLEHPCA 60
 Db 1 ANSFLELRHSLSREIRIEICDFEAKELFQVNDPTLAFWSKVDQCLVPLEHPCA 60
 QY 61 SLCCGHTCIDIGISFSCDCRSQMGREPCQREVSFLNCSLNDGCTHYCLEEVGMRCSG 120
 61 SLCCGHTCIDIGISFSCDCRSQMGREPCQREVSFLNCSLNDGCTHYCLEEVGMRCSG 120
 Db 61 SLCCGHTCIDIGISFSCDCRSQMGREPCQREVSFLNCSLNDGCTHYCLEEVGMRCSG 120
 QY 121 APGYKLGDDLLQCHPAVKEPCGPRPKMEKKRSHLKDTEDEQDQVDRLLDGKTRRGD 180
 121 APGYKLGDDLLQCHPAVKEPCGPRPKMEKKRSHLKDTEDEQDQVDRLLDGKTRRGD 180
 Db 121 APGYKLGDDLLQCHPAVKEPCGPRPKMEKKRSHLKDTEDEQDQVDRLLDGKTRRGD 180
 QY 181 SPQVYVLLDSKKKLAGAVLHPSWVLTAAHOMDSKKLVRLGEYDLRMEKELDDI 240
 181 SPQVYVLLDSKKKLAGAVLHPSWVLTAAHOMDSKKLVRLGEYDLRMEKELDDI 240
 Db 181 SPQVYVLLDSKKKLAGAVLHPSWVLTAAHOMDSKKLVRLGEYDLRMEKELDDI 240
 QY 241 KEVFNHNYSKSTTDNDIALHLAOPATLSQTIIVICLPDGLAERELNOAQGETLVYTGW 300
 241 KEVFNHNYSKSTTDNDIALHLAOPATLSQTIIVICLPDGLAERELNOAQGETLVYTGW 300
 Db 241 KEVFNHNYSKSTTDNDIALHLAOPATLSQTIIVICLPDGLAERELNOAQGETLVYTGW 300
 QY 301 GHSSREKAKRNRTPVNLNFIKIPVPHNECSEVSNMVCAGILGDRQDACEGDS 360
 301 GHSSREKAKRNRTPVNLNFIKIPVPHNECSEVSNMVCAGILGDRQDACEGDS 360
 Db 301 GHSSREKAKRNRTPVNLNFIKIPVPHNECSEVSNMVCAGILGDRQDACEGDS 360
 QY 361 GGPVVASFHGTWPLVGLVSWGSCGLHNHYGYTVKVSRYLDMHGHIRDEKAPQKSNAP 419
 361 GGPVVASFHGTWPLVGLVSWGSCGLHNHYGYTVKVSRYLDMHGHIRDEKAPQKSNAP 419
 Db 361 GGPVVASFHGTWPLVGLVSWGSCGLHNHYGYTVKVSRYLDMHGHIRDEKAPQKSNAP 419

RESULT 43

AAU25086
 AAU25086 standard; protein; 460 AA.

XX AC AAU25086;
 XX DT 11-DEC-1997 (first entry)
 XX DE Human protein C.
 XX KW Protein C; transgenic animal; sheep; rabbit; cattle; goat; milk;
 XX KM blood clotting; anticoagulant; human.
 XX OS Homo sapiens.
 XX
 EH Key Location/Qualifiers
 FT Cleavage-site 199..200
 FT /note="two-chain cleavage site"
 XX
 XX MO972043-A1.
 XX
 XX PD 05-JUN-1997.
 XX
 XX PF 26-NOV-1996; 96MO-US018866.
 XX
 XX PR 30-NOV-1995; 95US-00565074.
 XX PR 13-JUN-1996; 96US-0019692P.
 XX (ZYMO) ZYMOGENETICS INC.
 XX (PELT-) PELT THERAPEUTICS.
 XX

PI Garner I, Cottingham I, Temperley SM, Foster DC, Sprecher CA,
 PI Prunkard DE;
 XX WPI; 1997-210599/28.
 DR N-PSDB; AAT9723, AAT9724.
 XX
 PT Production of protein C in transgenic animal - useful for high quantity
 PT protein C production with therapeutic value.
 XX
 PS Disclosure; Page 58-60; 99pp; English.

CC This polypeptide comprises human protein C. A claimed method for
 CC producing recombinant human protein C in the milk of a transgenic animal
 CC involves: (a) providing a DNA construct comprising DNA encoding a
 CC secretion signal and a protein C propeptide, operably linked to DNA
 CC encoding two-chain cleavage site-modified protein C, the 2 DNA sequences
 CC being linked to elements required for protein C expression in a mammary
 CC gland of a host female animal; and (b) using the DNA construct to breed a
 CC transgenic animal (esp. sheep, rabbit, cattle, goat) that produces
 CC protein C in its milk, at least 90% of the protein C being in the two-
 CC chain form. Modification of the protein C two-chain cleavage site (see
 CC AAU25085) improves the maturation of recombinant protein C from single
 CC chain to two-chain form
 XX

Sequence 460 AA;

Query Match 99.7%; Score 2317; DB 2; Length 460;

Best Local Similarity 100.0%; Pred. No. 9.5e-143;
 Matches 418; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 ANSFLELRHSLSREIRIEICDFEAKELFQVNDPTLAFWSKVDQCLVPLEHPCA 60
 43 ANSFLELRHSLSREIRIEICDFEAKELFQVNDPTLAFWSKVDQCLVPLEHPCA 102
 Db 43 ANSFLELRHSLSREIRIEICDFEAKELFQVNDPTLAFWSKVDQCLVPLEHPCA 102
 QY 61 SLCCGHTCIDIGISFSCDCRSQMGREPCQREVSFLNCSLNDGCTHYCLEEVGMRCSG 120
 103 SLCCGHTCIDIGISFSCDCRSQMGREPCQREVSFLNCSLNDGCTHYCLEEVGMRCSG 162
 Db 103 SLCCGHTCIDIGISFSCDCRSQMGREPCQREVSFLNCSLNDGCTHYCLEEVGMRCSG 162
 QY 121 APGYKLGDDLLQCHPAVKEPCGPRPKMEKKRSHLKDTEDEQDQVDRLLDGKTRRGD 180
 169 APGYKLGDDLLQCHPAVKEPCGPRPKMEKKRSHLKDTEDEQDQVDRLLDGKTRRGD 222
 Db 169 APGYKLGDDLLQCHPAVKEPCGPRPKMEKKRSHLKDTEDEQDQVDRLLDGKTRRGD 222
 QY 181 SPQVYVLLDSKKKLAGAVLHPSWVLTAAHOMDSKKLVRLGEYDLRMEKELDDI 240
 223 SPQVYVLLDSKKKLAGAVLHPSWVLTAAHOMDSKKLVRLGEYDLRMEKELDDI 282
 Db 223 SPQVYVLLDSKKKLAGAVLHPSWVLTAAHOMDSKKLVRLGEYDLRMEKELDDI 282
 QY 241 KEVFNHNYSKSTTDNDIALHLAOPATLSQTIIVICLPDGLAERELNOAQGETLVYTGW 300
 283 KEVFNHNYSKSTTDNDIALHLAOPATLSQTIIVICLPDGLAERELNOAQGETLVYTGW 342
 Db 283 KEVFNHNYSKSTTDNDIALHLAOPATLSQTIIVICLPDGLAERELNOAQGETLVYTGW 342
 QY 301 GHSSREKAKRNRTPVNLNFIKIPVPHNECSEVSNMVCAGILGDRQDACEGDS 360
 343 GHSSREKAKRNRTPVNLNFIKIPVPHNECSEVSNMVCAGILGDRQDACEGDS 402
 Db 343 GHSSREKAKRNRTPVNLNFIKIPVPHNECSEVSNMVCAGILGDRQDACEGDS 402
 QY 361 GGPVVASFHGTWPLVGLVSWGSCGLHNHYGYTVKVSRYLDMHGHIRDEKAPQKSNAP 419
 403 GGPVVASFHGTWPLVGLVSWGSCGLHNHYGYTVKVSRYLDMHGHIRDEKAPQKSNAP 460
 Db 403 GGPVVASFHGTWPLVGLVSWGSCGLHNHYGYTVKVSRYLDMHGHIRDEKAPQKSNAP 460

RESULT 44

AAU99013
 AAU99013 standard; protein; 419 AA.

XX AC AAU99013;
 XX DT 23-AUG-2002 (first entry)
 XX DE Human Protein C zymogen protein mutant K193N/A195S.
 XX
 XX KM Human; Protein C; N-glycosylation; APC; activated protein C; zymogen;
 XX serum half-life; chromosome 2q13-q14; stroke; myocardial infarction;
 XX after venous thrombosis; disseminated intravascular coagulation; DIC;
 XX sepsis; septic shock; embolism; pulmonary embolism; burn; pregnancy;
 KM

KM bone marrow transplantation; major surgery; trauma; ARDS; coagulant;
 KW adult respiratory distress syndrome; alpha-1 antitrypsin, mutant; mutein.
 OS Homo sapiens.
 XX Synthetic.
 XX Key Location/Qualifiers
 FT Protein 1..155
 FT Peptide /label= Light_chain
 FT Peptide 156..157
 FT Protein /label= Lys_Arg_dipeptide
 FT Peptide 158..419
 FT Peptide /label= Heavy_chain
 FT Peptide 158..169
 FT Misc-difference 193
 FT Misc-difference /note= "Wild-type Lys substituted by Asn"
 FT Misc-difference 195
 FT Misc-difference /note= "Wild-type Ala substituted by Ser"
 XX MO200232461-A2.
 XX 25-APR-2002.
 XX 15-OCT-2001; 2001WO-DK00679.
 XX 18-OCT-2000; 2000DK-00001560.
 XX 18-OCT-2000; 2000US-0242268P.
 XX 21-JUN-2001; 2001DK-00000970.
 XX 21-JUN-2001; 2001US-0300154P.
 XX (MAXY-) MAXYGEN APS.
 XX (MAXY-) MAXYGEN HOLDINGS LTD.
 XX Andersen KV, Pedersen AH, Friesgaard PO.
 DR WPI; 2002-489875/52.
 XX Novel conjugate useful for treating or preventing septic shock, stroke
 PT and myocardial infarction, comprises non-polypeptide group covalently
 FT attached to protein C polypeptide comprising an attachment group.
 XX Claim 9, Page; 92pp; English.

CC reduced anticoagulant activity is beneficial to reduce the risk of
 CC bleeding while maintaining the antiinflammatory activity of APC
 CC (activated protein C) conjugates. This must be especially important when
 CC the conjugate has an extended plasma life. The gene for protein C is
 CC located on chromosome 2q13-q14. The present sequence represents a zymogen
 CC protein C variant of the invention. Note: The present sequence is not
 CC shown in the specification but was created by the indexer using the
 CC protein C sequence appearing as AAU99002 and the information in claim 9
 XX
 SQ Sequence 419 AA:
 Query Match 99.7%; Score 2316; DB 5; Length 419;
 Best Local Similarity 99.5%; Pred. No. 1e-142;
 Matches 417; Conservative 1; Mismatches 1; Indels 0; Gaps 0;
 QY 1 ANSPLEELRHSLEERCEIEICDEFEAKELFQNVDDTLAFMSKRVGDDQLVLPHPHCA 60
 DB 1 ANSPLEELRHSLEERCEIEICDEFEAKELFQNVDDTLAFMSKRVGDDQLVLPHPHCA 60
 QY 61 SLCCGHGTCIDIGISPSDCRSWGGRFCQREVSFLNCSLDNGCTHYCLEEVMRRCSG 120
 DB 61 SLCCGHGTCIDIGISPSDCRSWGGRFCQREVSFLNCSLDNGCTHYCLEEVMRRCSG 120
 QY 121 APGYLGDLLQCHPAVYPCGGRPWKMEKSKSLKRTENDQNDVDPRLDGGKTRRGD 180
 DB 121 APGYLGDLLQCHPAVYPCGGRPWKMEKSKSLKRTENDQNDVDPRLDGGKTRRGD 180
 QY 181 SPQVVLNDSKKGLACAVLTIPSWLTAAHCDSEKLLVRLGEYDLRRMEKELDDI 240
 DB 181 SPQVVLNDSKKGLACAVLTIPSWLTAAHCDSEKLLVRLGEYDLRRMEKELDDI 240
 QY 241 KEVFPVHPYNSKSTDDIALHLAQPATLSQITVPICLPDSGLARELNAGQETLVYGM 300
 DB 241 KEVFPVHPYNSKSTDDIALHLAQPATLSQITVPICLPDSGLARELNAGQETLVYGM 300
 QY 301 GHSSREKAKRNTVYLNFEIKIPVPHNECSRWMSNWSNMLCAGTIGDDQDACEGDS 360
 DB 301 GHSSREKAKRNTVYLNFEIKIPVPHNECSRWMSNWSNMLCAGTIGDDQDACEGDS 360
 QY 361 GGPVYASPHGTWFLVGLVMSGEGCGLLHNYGVYTKVRYTLDMIGHIRDRKAFQKSNAP 419
 DB 361 GGPVYASPHGTWFLVGLVMSGEGCGLLHNYGVYTKVRYTLDMIGHIRDRKAFQKSNAP 419
 XX
 DE Human Protein C zymogen protein mutant S216N/K218S.
 XX
 XX Human, Protein C, N-glycosylation; APC; activated protein C; zymogen;
 KW serum half-life; chromosome 2q13-q14; stroke; myocardial infarction;
 KW after venous thrombosis; disseminated intravascular coagulation; DIC;
 KW septic shock; embolism; pulmonary embolism; burn; pregnancy;
 KW bone marrow transplantation; major surgery; trauma; ARDS; coagulant;
 KW adult respiratory distress syndrome; alpha-1 antitrypsin, mutant; mutein.
 OS Homo sapiens.
 XX Synthetic.
 XX Key Location/Qualifiers
 FT Protein 1..155
 FT Peptide /label= Light_chain
 FT Peptide 156..157
 FT Protein /label= Lys_Arg_dipeptide
 FT Peptide 158..419
 FT Protein /label= Heavy_chain
 FT Peptide 158..169
 FT Peptide /label= Activation_peptide

QY	1	ANSFLIEELHSSLSRECEIEI CDPEEKEL FQNVDDTLAFMSKRVGDQCIVLPLEHPQA	60
QY	1	ANSFLIEELHSSLSRECEIEI CDPEEKEL FQNVDDTLAFMSKRVGDQCIVLPLEHPQA <td>60</td>	60
Db	1	ANSFLIEELHSSLSRECEIEI CDPEEKEL FQNVDDTLAFMSKRVGDQCIVLPLEHPQA <td>60</td>	60
QY	61	SLCCGHTGTCIDIGSPDCDSGMEGFCQREVSFLNCSLDNGAGCTHYCLBEVGRRCSC <td>120</td>	120
QY	121	APRYKLGDIDLQCHPAVPEFCGRPMKMEKQSHLKRPTDEQDQVDPPLDGKATRRGD <td>180</td>	180
Db	121	APRYKLGDIDLQCHPAVPEFCGRPMKMEKQSHLKRPTDEQDQVDPPLDGKATRRGD <td>180</td>	180
QY	181	SPQVYVLLDSKKLACGAVLTHPSWVLTAAHCDSESKLTVRLGEYDLRRMEKVELDLDI <td>240</td>	240
Db	181	SPQVYVLLDSKKLACGAVLTHPSWVLTAAHCDSESKLTVRLGEYDLRRMEKVELDLDI <td>240</td>	240
QY	241	KEVFAHPVYSKSTTDDIALHLAQPATLSQITVPICLPDSGLAEELNQAQETLVYTWG <td>300</td>	300
Db	241	KEVFAHPVYSKSTTDDIALHLAQPATLSQITVPICLPDSGLAEELNQAQETLVYTWG <td>300</td>	300
QY	301	GYSSEKEAKRNNTVLAFLKIPVPEHNCSEFWSNNVSENMLCAGILGRDQACEDS <td>360</td>	360
Db	301	GYSSEKEAKRNNTVLAFLKIPVPEHNCSEFWSNNVSENMLCAGILGRDQACEDS <td>360</td>	360
QY	361	GGPMVASFHGTWFLVGLVSWGEGCGLHNYGYTYKVSRYLDMHGHIRDEKAPQKSWAP <td>419</td>	419
Db	361	GGPMVASFHGTWFLVGLVSWGEGCGLHNYGYTYKVSRYLDMHGHIRDEKAPQKSWAP <td>419</td>	419
RESULT 46			
AAU9057	ID	AAU9057 standard, protein; 419 AA.	
XX	AC	AAU9057;	
XX	23-AUG-2002	(first entry)	
XX	Human	Protein C zymogen protein mutant K308N/A310S.	
XX	Human; Protein C; N-glycosylation; ABC; activated protein C; zymogen;		
XX	serum half-life; chromosome 2q13-q14; stroke; myocardial infarction;		
XX	after venous thrombosis; disseminated intravascular coagulation; DIC;		
XX	sepsis; septic shock; embolism; pulmonary embolism; burn; pregnancy;		
XX	bone marrow transplantation; major surgery; trauma; ARDS; coagulant;		
XX	adult respiratory distress syndrome; alpha-1 antitrypsin; mutant; mutein.		
OS	Homo sapiens.		
OS	Synthetic.		
XX	Key	Location/Qualifiers	
EH	Protein	1..155	
FT	Peptide	/label= Light_chain	
FT	Protein	156..157	
FT	Protein	/label= Lys_Arg_dipeptide	
FT	Peptide	158..419	
FT	Peptide	/label= Heavy_chain	
FT	Misc-difference	158..169	
FT	Misc-difference	308	
FT	Misc-difference	310	
FT	Misc-difference	310	
XX	PN	W0200232461-A2.	
XX	PD	25-APR-2002.	
XX	PF	15-OCT-2001; 2001MO-DK000679.	
XX	PR	18-OCT-2000; 2000DK-00001560.	
XX	PR	18-OCT-2000; 2000US-0242266P.	
XX	PR	21-JUN-2001; 2001DK-00000970.	
XX	PR	21-JUN-2001; 2001US-0300154P.	

The invention relates to a conjugate (I) comprising at least one non-polypeptide moiety (II) (e.g. an N-glycosyl group) covalently attached to a protein C polypeptide comprising an amino acid sequence which differs from that of a parent protein C polypeptide (III) in at least one introduced and/or at least one removed amino acid residue comprising an attachment group for the non-polypeptide group (e.g. an N-glycosylation site). Also included are (1) a variant (IV) of (III) comprising a substitution in a position (P) where (P) is an amino acid with at least 25% of its side group exposed to the surface, with the proviso that the substitution is not Thr245Ser/Ala/His/Lys/Arg/Asn/Asp/Glu/Gly/Gln, Tyr310Ser/Ala/Thr/His/Lys/Arg/Asn/Asp/Glu/Gly/Gln or Phe315Ser/Ala/Thr/Lys/Lys/Arg/Asn/Asp/Glu/Gly/Gln; (2) a nucleotide sequence (V) encoding (IV); (3) an expression vector (VI) comprising (V); (4) a host cell (VII) comprising (V) or (VI); (5) increasing (M2) the functional in vivo half-life or the serum half-life of a parent protein C polypeptide. The conjugates, variants and protein C proteins are useful as medicaments, and in the manufacture of medicaments for the treatment (and diagnosis/prevention) of stroke, myocardial infarction, after venous thrombosis, disseminated intravascular coagulation (DIC), sepsis, septic shock, emboli e.g. pulmonary emboli, transplantation such as bone marrow transplantation, burns, pregnancy, major surgery/trauma or adult respiratory distress syndrome (ARDS). The variant protein C has an increased resistance to activation by e.g. human plasma and alpha-1 antitrypsin. The conjugates have an increased in vivo half-life, increased serum half-life, increased resistance to inhibitors, reduced renal clearance, reduced immunogenicity and/or increased bioavailability. The conjugate offers a number of advantages over the currently available APC products, including longer duration between injections, Moreover, a administration of less protein, and fewer side effects. Moreover, a reduced anticoagulant activity is beneficial to reduce the risk of bleeding while maintaining the antiinflammatory activity of APC (activated protein C) conjugates. This must be especially important when the conjugate has an extended plasma life. The gene for protein C is located on chromosome 2q31-q14. The present sequence represents a cDNA of protein C variant of the invention. Note: The present sequence is not shown in the specification but was created by the indexer using the protein C sequence appearing as A0595002 and the information in claim 9

RESULT 47

ID AAU99007 standard; protein; 419 AA.

AC AAU99007;

DT 23-AUG-2002 (first entry)

DB Human Protein C zymogen protein mutant S190N/K192S.

Human; Protein C; N-glycosylation; APC; activated protein C; zymogen;

after venous thrombosis; disseminated intravascular coagulation; DIC; KW

sepsis; septic shock; embolism; pulmonary embolism; burn; pregnancy; major surgery; trauma; coagulant; ABDS: coagulant;

KW adult respiratory distress syndrome; alpha-1 antitrypsin; mutant; mu

OS Homo sapiens

OS Synthetic

Key	Location/Qualifiers
Key	Location/Qualifiers

```

1: : 100
/label= Light chain
RT      protein

```

Peptide 156. :157
/1ahel = Iys Arg d1n

FT	Protein	158.419

FT	Peptide	
158.	.169	

	/	_____
F1		
FT	Misc-difference	190

```
WT /note= "Wild-type S
```

```
ET /note= "Wild-type L
```

PN WO200232461-A2.

25-APR-2002.

XX
DE 15-OCT-2001 : 2001WO-DK000679.

XX 000000 00001560

PR 18-OCT-2000; 2000US-0242268P.

21-JUN-2001; 2001US-0300154P.

XX
PA (MAXY-) MAXYGEN APS.

PA (MAXY-) MAXYGEN HOLDINGS LTD.

PI Andersen KV, Pedersen AH, Freskga

WPI; 2002-489875/52.

XX
PT Novel conjugate useful for treating

PT and myocardial infarction, comprises

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 6
 7
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 10
 11
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The invention relates to a conjugate (I) comprising at least one non-

Query Match	99.7%	Score 2316	DB 5	Length 419
Best Local Similarity	99.5%	Pred. No. 1e-142		
Matches 417; Conservative	1;	Mismatches 1;	Indels 0;	Gaps 0;

QY 1 ANSLFELTSHSLREBCIEEICDPEBAEITFQVNDUTLAFMSHVNQDCLVPLIEHPCA 60
Db 1 ANSLFELHRSLLREBCIEEICDPEBAEITFQVNDUTLAFMSHVNQDCLVPLIEHPCA 60
QY 61 SLCCGHGTCTDIDIGSFQDQSRGSGEGARVQCEPVSFLNCSLDNGGCTHYCLIEVGMRCSC 120
Db 61 SLCCGHGTCTDIDIGSFQDQSRGSGEGARVQCEPVSFLNCSLDNGGCTHYCLIEVGMRCSC 120
QY 121 APGYKLGDDLLQCPHAYKFPQGRPWKRMEKRSHLKRDTEDEQVDPRLLTGKMTRRGD 180
Db 121 APGYKLGDDLLQCPHAYKFPQGRPWKRMEKRSHLKRDTEDEQVDPRLLTGKMTRRGD 180
QY 181 SPWQVVLDDKSKKLACGAVLLHPMSWVLRPAHQNDESKLLVRLSEYDLPKMKMTLLDII 240
Db 181 SPWQVVLDDKSKKLACGAVLLHPMSWVLRPAHQNDESKLLVRLSEYDLPKMKMTLLDII 240
QY 241 KEVEVPHNYSKSTTNDCLALHPLAOPALISOTIYPCLDPSGLARELNDAQCEITVLTGM 300
Db 241 KEVEVPHNYSKSTTNDCLALHPLAOPALISOTIYPCLDPSGLARELNDAQCEITVLTGM 300
QY 301 GYHSRREKAKNRRTFFVNLPIKIPVPHNBESEVMSNMVSENMLOAGILGDRQDCESDS 360
Db 301 GYHSRREKAKNRRTFFVNLPIKIPVPHNBESEVMSNMVSENMLOAGILGDRQDCESDS 360
QY 361 GGPWYASFHGTNVLVIGMSNDEGGLAHNYGVYKXSRVLDIHSHLRDEAPQKSNAP 419
Db 361 GGPWYASFHGTNVLVIGMSNDEGGLAHNYGVYKXSRVLDIHSHLRDEAPQKSNAP 419

RESULT 48

AAU99016	standard; protein; 419 AA.
AC	AAU99016;
AD	23-Arg-2002 (first entry)
AE	Human Protein C zymogen protein mutant D214N/S216T.
AF	Human; Protein C; N-glycosylation; APC; activated protein C; zymogen; serum half-life; chromosome 2q13-q14; stroke; myocardial infarction; ather; venous thrombosis; disseminated intravascular coagulation; DIC; sepsis; septic shock; embolism; pulmonary embolism; burn; pregnancy; bone marrow transplantation; major surgery; trauma; ARDS; coagulant; adult respiratory distress syndrome; alpha-1 antitrypsin; mutant; metuin.
AG	Homo sapiens.
AH	Synthetic.
AI	Key
AL	Location/qualifiers
AM	1..155
AN	/label= Light_chain
AO	156..157
AP	/label= Lys_Arg_dipeptide
AQ	158..419
AR	/label= Heavy_chain
AS	158..169
AT	Peptide
AV	/label= Activation_peptide
AW	Misc-difference 214
AX	/note= "Wild-type Asp substituted by Asn"
AY	Misc-difference 216
AZ	/note= "Wild-type Ser substituted by Thr"
BA	WO200232461-A2.
BB	25-Apr.-2002.
BC	15-Oct.-2001; 2001MO-DK000679.
BD	18-Oct.-2000; 2000DK-00001560.
BE	18-Oct.-2000; 2000US-0242268P.
BF	21-JUN-2001; 2001DK-00000970.
BG	21-JUN-2001; 2001US-0300154P.
BH	(MAXY-) MAXYGEN ABS.
BI	(MAXY-) MAXYGEN HOLDINGS LTD.
BJ	Andersen KV, Pedersen AH, Frestgaard PO;
BK	WPI; 2002-489875/52.
BL	Novel conjugate useful for treating or preventing septic shock, stroke and myocardial infarction, comprises non-polypeptide group covalently attached to protein C polypeptide comprising an attachment group.
BM	Claim 9; Page; 92pp; English.
BN	The invention relates to a conjugate (I) comprising at least one non-polypeptide moiety (II) (e.g. an N-glycosyl group) covalently attached to a protein C polypeptide comprising an amino acid sequence which differs from that of a parent protein C polypeptide (III) in at least one introduced and/or at least one removed amino acid residue comprising an attachment group for the non-polypeptide group (e.g. an N-glycosylation site). Also included are (1) a variant (IV) of (III) comprising a substitution in a position (p) where (p) is an amino acid with at least 25% of its side group exposed to the surface, with the proviso that the substitution is not Thr245Ser/Ala/His/Lys/Arg/Asn/Asp/Glu/Gly/Gln, Tyx302Ser/Ala/Thr/His/Lys/Arg/Asn/Asp/Glu/Gly/Gln or Phe165Ser/Ala/Thr/His/Lys/Arg/Asn/Asp/Glu/Gly/Gln; (2) a nucleotide sequence (V) encoding (IV); (3) an expression vector (VI) comprising (V); (4) a host cell (VII) comprising (V) or (VI); (5) increasing (M2) the functional in vivo half-life of the serum half-life of a parent protein C polypeptide. The conjugates variants and protein C proteins are useful as medicaments.

CC and in the manufacture of medicaments for the treatment (and
 CC diagnosis/prevention) of stroke, myocardial infarction, after venous
 CC thrombosis, disseminated intravascular coagulation (DIC), sepsis, septic
 CC shock, emboli e.g. pulmonary emboli, transplantation such as bone marrow
 CC transplantation, burns, pregnancy, major surgery/trauma or adult
 CC respiratory distress syndrome (ARDS). The variant protein C has an
 CC increased resistance to activation by e.g. human plasma and alpha-1
 CC antitrypsin. The conjugates have an increased in vivo half-life,
 CC increased serum half-life, increased resistance to inhibitors, reduced
 CC renal clearance, reduced immunogenicity and/or increased bioavailability.
 CC The conjugate offers a number of advantages over the currently available
 CC APC products, including longer duration between injections,
 CC administration of less protein, and fewer side effects. Moreover, a
 CC reduced anticoagulant activity is beneficial to reduce the risk of
 CC bleeding while maintaining the anti-inflammatory activity of APC
 CC (activated protein C) conjugates. This must be especially important when
 CC the conjugate has an extended plasma life. The gene for protein C is
 CC located on chromosome 2q13-q14. The present sequence represents a zymogen
 CC protein C variant of the invention. Note: The present sequence is not
 CC shown in the specification but was created by the indexer using the
 CC protein C sequence appearing as AAU99002 and the information in claim 9
 CC
 XX Sequence 419 AA:
 SQ

Query Match 99.7%; Score 2316; DB 5; Length 419;
 Best Local Similarity 99.5%; Pred. No. 1e-142;
 Matches 417; Conservative 2; Mismatches 0; Indels 0; Gaps 0;

QY 1 ANSTLELRSSLEKCEETCPPEAKIFQVDDTLARSKYNDGQCVLPLERPA 60
 DB 1 ANSPLELRHSSLEKCEETCPPEAKIFQVDDTLARSKYNDGQCVLPLERPA 60
 QY 61 SLCCGSGTCTDGGSPGCSGSGWEGRFQREVSFLNCSLDNGCTHYCLEVGMRCSC 120
 DB 61 SLCCGSGTCTDGGSPGCSGSGWEGRFQREVSFLNCSLDNGCTHYCLEVGMRCSC 120
 QY 121 APGYKLGDDLLQCHPAVPCGGRPWKMEKKSLSKROTEQEDQVPRLLDGNATERGD 180
 DB 121 APGYKLGDDLLQCHPAVPCGGRPWKMEKKSLSKROTEQEDQVPRLLDGNATERGD 180
 QY 181 SPQVYVLLDSKKLAQAVLTHBSWVLTAAHCDSSKCLVRLGEVTLRMRKVELDDT 240
 DB 181 SPQVYVLLDSKKLAQAVLTHBSWVLTAAHCDSSKCLVRLGEVTLRMRKVELDDT 240
 QY 241 KEVPHNYSKSTTNDIALHLAQPATLSQITVPCEDSGAERELNQAQGETLVYGM 300
 DB 241 KEVPHNYSKSTTNDIALHLAQPATLSQITVPCEDSGAERELNQAQGETLVYGM 300
 QY 301 GYHSSREKAKRRKRFVNLFIKIPVPHNECEVSNMVSNNMLCAGIIGDRQACEGDS 360
 DB 301 GYHSSREKAKRRKRFVNLFIKIPVPHNECEVSNMVSNNMLCAGIIGDRQACEGDS 360
 QY 361 GGPWVASFGTWFLVGLVSWEGGGLANNGYTVASXVLDWTHGHTRKAPKQSWAP 419
 DB 361 GGPWVASFGTWFLVGLVSWEGGGLANNGYTVASXVLDWTHGHTRKAPKQSWAP 419

RESULT 49

AAU99051 standard; protein; 419 AA.

AAU99051;

23-AUG-2002 (first entry)

Human Protein C zymogen protein mutant S305N/E307S.

Human; protein C; N-glycosylation; APC; activated protein C; zymogen;
 serum half-life; chromosome 2q13-q14; stroke; myocardial infarction;
 after venous thrombosis; disseminated intravascular coagulation; DIC;
 sepsis; septic shock; embolism; pulmonary embolism; burn; pregnancy;
 bone marrow transplantation; major surgery; trauma; ARDS; coagulant;
 adult respiratory distress syndrome; alpha-1 antitrypsin; mutant; muten.

XX Homo sapiens.
 OS Synthetic.
 XX
 FH Key Location/Qualifiers
 FT Protein 1..155
 FT Peptide /label= Light_chain
 FT Peptide /label= Lys_Arg_dipeptide
 FT Protein 158..419
 FT Peptide /label= Heavy_chain
 FT Peptide 158..169
 FT Msc-difference 305
 FT Msc-difference 307 /note= "Wild-type Ser substituted by Asn"
 FT Msc-difference 307 /note= "Wild-type Glu substituted by Ser"
 XX
 PD WO200232461-A2.
 PD 25-APR-2002.
 PF 15-OCT-2001; 2001WO-DK00679.
 XX
 XX 18-OCT-2000; 2000DK-00001560.
 PR 18-OCT-2000; 2000US-0242268P.
 PR 21-JUN-2001; 2001DK-00000970.
 PR 21-JUN-2001; 2001US-0300154P.
 XX
 PA (MAXY-) MAXYGEN APS.
 PA (MAXY-) MAXYGEN HOLDINGS LTD.
 XX
 PI Andersen KV, Pedersen AH, Friesgaard PO;
 DR WPI; 2002-489875/52.
 XX
 PT Novel conjugate useful for treating or preventing septic shock, stroke
 PT and myocardial infarction, comprises non-polypeptide group covalently
 PT attached to protein C polypeptide comprising an attachment group.
 XX
 PS Claim 9; Page; 92pp; English.
 XX
 CC The invention relates to a conjugate (I) comprising at least one non-
 CC polypeptide moiety (II) (e.g. an N-glycosyl group) covalently attached to
 CC a protein C polypeptide comprising an amino acid sequence which differs
 CC from that of a parent protein C polypeptide (III) in at least one
 CC introduced and/or at least one removed amino acid residue comprising an
 CC attachment group for the non-polypeptide group (e.g. an N-glycosylation
 CC site). Also included are (I) a variant (IV) of (III) comprising a
 CC substitution in a position (P) where (P) is an amino acid with at least
 CC 25% of its side group exposed to the surface, with the proviso that the
 CC substitution is not Thr245Ser/Ala/His/Lys/Arg/Asn/Asp/Glu/Gly/Gln,
 CC Tyr302Ser/Ala/Thr/His/Lys/Arg/Asn/Asp/Glu/Gly/Gln or Phe316Ser/Ala/Thr/
 CC His/Lys/Arg/Asn/Asp/Glu/Gly/Gln; (2) a nucleotide sequence (V) encoding
 CC (IV); (3) an expression vector (VI) comprising (V); (4) a host cell (VII)
 CC comprising (V) or (VI); (5) increasing (M2) the functional in vivo half-
 CC life of the serum half-life of a parent protein C polypeptide. The
 CC conjugates, variants and protein C proteins are useful as medicaments,
 CC and in the manufacture of medicaments for the treatment (and
 CC diagnosis/prevention) of stroke, myocardial infarction, after venous
 CC thrombosis, disseminated intravascular coagulation (DIC), sepsis, septic
 CC shock, emboli e.g. pulmonary emboli, transplantation such as bone marrow
 CC transplantation, burns, pregnancy, major surgery/trauma or adult
 CC respiratory distress syndrome (ARDS). The variant protein C has an
 CC increased resistance to activation by e.g. human plasma and alpha-1
 CC antitrypsin. The conjugates have an increased in vivo half-life,
 CC increased serum half-life, increased resistance to inhibitors, reduced
 CC renal clearance, reduced immunogenicity and/or increased bioavailability.
 CC The conjugate offers a number of advantages over the currently available
 CC APC products, including longer duration between injections. Moreover, a
 CC administration of less protein, and fewer side effects. Moreover, a
 CC reduced anticoagulant activity is beneficial to reduce the risk of
 CC bleeding while maintaining the anti-inflammatory activity of APC

CC (activated protein C) conjugates. This must be especially important when
 CC the conjugate has an extended plasma life. The gene for protein C is
 CC located on chromosome 2q13-q14. The present sequence represents a zymogen
 CC protein C variant of the invention. Note: The present sequence is not
 CC shown in the specification but was created by the indexer using the
 CC protein C sequence appearing as AAU99002 and the information in claim 9
 XX
 SQ Sequence 419 AA;

Query Match 99.7%; Score 2316; DB 5; Length 419;
 Best Local Similarity 99.8%; Pred. No. 1e-142;
 Matches 417; Conservative 1; Mismatches 1; Indels 0; Gaps 0;

QY 1 ANSFLELRHSSLRERCEIEICDFEAKELFQVNDITLAFMSKRVDSQGLVPLRHPCA 60
 DB 1 ANSFLELRHSSLRERCEIEICDFEAKELFQVNDITLAFMSKRVDSQGLVPLRHPCA 60
 QY 61 SLCCGHGTCIDIGISFSCDNRSGWGRPCQREVSFLNCSLDNGGCTHYCLEEYGMRCSC 120
 DB 61 SLCCGHGTCIDIGISFSCDNRSGWGRPCQREVSFLNCSLDNGGCTHYCLEEYGMRCSC 120
 QY 121 APGYKLGDDLQCHPAVKEPCGRPMKREKRSLSLRDTEDEQVDPRLIDKMTRECD 180
 DB 121 APGYKLGDDLQCHPAVKEPCGRPMKREKRSLSLRDTEDEQVDPRLIDKMTRECD 180
 QY 181 SPQVVLDSKKKLCAGAVLHPSWVLTAAHOMDESKLVVLGFDLRREKMEKLDDI 240
 DB 181 SPQVVLDSKKKLCAGAVLHPSWVLTAAHOMDESKLVVLGFDLRREKMEKLDDI 240
 QY 241 KEVFEHENSSTTDNDIALHLAOPATLSQTIYPICLPDGSLARELNOAGETLVTSW 300
 DB 241 KEVFEHENSSTTDNDIALHLAOPATLSQTIYPICLPDGSLARELNOAGETLVTSW 300
 QY 301 GHSSSEKAKARNRTFYVNTKTPVPHNCSFVMSNMVSENNLCAGILGRDADCEGDS 360
 DB 301 GHSSSEKAKARNRTFYVNTKTPVPHNCSFVMSNMVSENNLCAGILGRDADCEGDS 360
 QY 361 GGPVWASFGHTWFLVGSWEGCGILHNYGYTKYSRYLDMTHGHTDEKAPQKSMAP 419
 DB 361 GGPVWASFGHTWFLVGSWEGCGILHNYGYTKYSRYLDMTHGHTDEKAPQKSMAP 419

RESULT 50
 AAU99095
 ID AAU99095 standard; protein. 419 AA.

XX AC AAU99095;

XX DT 23-AUG-2002 (first entry)

XX DE Human Protein C zymogen protein mutant D214A.

XX KW Human; Protein C; N-glycosylation; APC; activated protein C; zymogen;
 KW serum half-life; chromosome 2q13-q14; stroke; myocardial infarction;
 KW after venous thrombosis; disseminated intravascular coagulation; DIC;
 KW sepsis; septic shock; embolism; pulmonary; burn; pregnancy;
 KW bone marrow transplantation; major surgery; trauma; ARDS; coagulancy;
 KW adult respiratory distress syndrome; alpha-1 antitrypsin; mutant; mutein.

XX OS Homo sapiens.
 XX SS Synthetic.

XX FH Key Location/Qualifiers

FT FT Protein 1..155 /label= Light_chain

FT FT Peptide 156..157 /label= Lys_Arg_dipeptide

FT FT Protein 158..419 /label= Heavy_chain

FT FT Peptide 158..169 /label= Activation_peptide

FT FT Misc-difference 214 /note= "Wild-type Asp substituted by Ala"

XX PN MO200232461-A2.

XX PD 25-APR-2002.

XX PF 15-OCT-2001; 2001WO-DK000679.

XX PR 18-OCT-2000; 2000DK-00001560.

XX PR 18-OCT-2000; 2000US-0242268P.

XX PR 21-JUN-2001; 2001DK-0000970.

XX PR 21-JUN-2001; 2001US-0300154P.

XX PA (MAXY-) MAXYGEN APS.

XX PA (MAXY-) MAXYGEN HOLDINGS LTD.

XX PT Andersen KV, Pedersen AH, Friesgaard PO;

XX PS WPI; 2002-469875/52.

XX PT Novel conjugate useful for treating or preventing septic shock, stroke
 PT and myocardial infarction, comprises non-polypeptide group covalently
 PT attached to protein C polypeptide comprising an attachment group.

XX Example 5; Page; 92pp; English.

XX The invention relates to a conjugate (I) comprising at least one non-
 CC polypeptide moiety (II) (e.g. an N-glycosyl group) covalently attached to
 CC a protein C polypeptide comprising an amino acid sequence which differs
 CC from that of a parent protein C polypeptide (III) in at least one
 CC introduced and/or at least one removed amino acid residue comprising an
 CC attachment group for the non-polypeptide group (e.g. an N-glycosylation
 CC site). Also included are (1) a variant (IV) of (III) comprising a
 CC substitution in a position (P) where (P) is an amino acid with at least
 CC 25% of its side group exposed to the surface, with the proviso that the
 CC substitution is not Thr245Ser/Ala/His/Lys/Arg/Asn/Asp/Glu/Gly/Gln,
 CC Tyr302Ser/Ala/Thr/His/Lys/Arg/Asn/Asp/Glu/Gly/Gln or Phe166Ser/Ala/Thr/
 CC His/Lys/Arg/Asn/Asp/Glu/Gly/Gln; (2) a nucleotide sequence (V) encoding
 CC (IV); (3) an expression vector (VI) comprising (V); (4) a host cell (VII)
 CC comprising (V) or (VI); (5) increasing (M2) the functional in vivo half-
 CC life or the serum half-life of a parent protein C polypeptide. The
 CC conjugates, variants and protein C proteins are useful as medicaments,
 CC and in the manufacture of medicaments for the treatment (and
 CC diagnosis/prevention) of stroke, myocardial infarction, after venous
 CC thrombosis, disseminated intravascular coagulation (DIC), sepsis, septic
 CC shock, emboli e.g. pulmonary emboli, transplantation such as bone marrow
 CC transplantation, burns, pregnancy, major surgery/trauma or adult
 CC respiratory distress syndrome (ARDS). The variant protein C has an
 CC increased resistance to activation by e.g. human plasma and alpha-1
 CC antitrypsin. The conjugates have an increased in vivo half-life, reduced
 CC renal clearance, reduced immunogenicity and/or increased bioavailability.
 CC The conjugate offers a number of advantages over the currently available
 CC APC products, including longer duration between injections. Moreover, a
 CC administration of less protein, and fewer side effects. Moreover, a
 CC reduced anticoagulant activity is beneficial to reduce the risk of
 CC bleeding while maintaining the antiinflammatory activity of APC
 CC (activated protein C) conjugates. This must be especially important when
 CC the conjugate has an extended plasma life. The gene for protein C is
 CC located on chromosome 2q13-q14. The present sequence represents a zymogen
 CC protein C variant of the invention. Note: The present sequence is not
 CC shown in the specification but was created by the indexer using the
 CC protein C sequence appearing as AAU99002 and the information in claim 9
 XX

SQ Sequence 419 AA;

Query Match 99.7%; Score 2316; DB 5; Length 419;
 Best Local Similarity 99.8%; Pred. No. 1e-142;
 Matches 418; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 ANSFLELRHSSLRERCEIEICDFEAKELFQVNDITLAFMSKRVDSQGLVPLRHPCA 60
 DB 1 ANSFLELRHSSLRERCEIEICDFEAKELFQVNDITLAFMSKRVDSQGLVPLRHPCA 60

QY 61 SLCCGHTGCTIDISGFSDDCRSGMEGRFCQREVSFLNCSLDNGGCTHYCLEEYGMRRGSC 120
 DB 61 SLCCGHTGCTIDISGFSDDCRSGMEGRFCQREVSFLNCSLDNGGCTHYCLEEYGMRRGSC 120
 QY 121 APGYKLGDDLLQCHPAVFPQGRPMKMEKKSHLKRDTEDOEDQVDFRLIDGKMTRRGD 180
 DB 121 APGYKLGDDLLQCHPAVFPQGRPMKMEKKSHLKRDTEDOEDQVDFRLIDGKMTRRGD 180
 QY 181 SPWQVVLDSKKKLAAGAVLIHPSWVLTAAHCDMSKKLLVRLGEYDRLRMEKWLDDI 240
 DB 181 SPWQVVLDSKKKLAAGAVLIHPSWVLTAAHCDMSKKLLVRLGEYDRLRMEKWLDDI 240
 QY 241 KEVFPVHNYSKSTTNDIALHLAOPATLSQTVPICLPDSGLAEKRLNQGSETLVYGM 300
 DB 241 KEVFPVHNYSKSTTNDIALHLAOPATLSQTVPICLPDSGLAEKRLNQGSETLVYGM 300
 QY 301 GYHSSREKAKENRTFVNFIKIPVPNHNCSEVMSNMVSENNLCAGILGRDQACGDS 360
 DB 301 GYHSSREKAKENRTFVNFIKIPVPNHNCSEVMSNMVSENNLCAGILGRDQACGDS 360
 QY 361 GGPVVASFHGTWFLVGLVSWGEGGGLLNHYGYTTKVSRYLDMTHGHIRDKAPQKSWAP 419
 DB 361 GGPVVASFHGTWFLVGLVSWGEGGGLLNHYGYTTKVSRYLDMTHGHIRDKAPQKSWAP 419

RESULT 51

AAB36898
 ID AAB36898 standard; protein; 419 AA.

AC AAB36898;
 DT 26-FEB-2001 (first entry)
 XX
 DE Human protein C derivative 5.
 XX
 KW Protein C; human; vascular occlusive; burn; transplantation;
 KW deep vein thrombosis; sickle cell; thalassemia; thrombotic disorders;
 KW myocardial infarction; angina; stroke.

OS Homo sapiens.

XX WO20066754-A1.

XX 09-NOV-2000.

XX 13-APR-2000; 2000WO-US008722.

XX 30-APR-1999; 99US-0131801P.

XX (EHLI) LILLY & CO ELI.

XX Gerlitz BE, Jones BE;

XX WPI; 2001-007227/01.

XX N-PSDB; AAC83315.

PT Protein C derivatives, useful for treating vascular occlusive disorder,
 PT hypercoagulable state, thrombotic disorder and disease states
 PT predisposing thrombosis, comprises specific amino acid substitutions.
 XX
 PS Claim 6; Page 49-51; 57pp; English.

XX The present invention relates to a human protein C derivative. The
 CC protein is useful for treating vascular occlusive disorders,
 CC hypercoagulable states such as sepsis, disseminated intravascular
 CC coagulation, purpura fulminans, major trauma, major surgery, burns, adult
 CC respiratory distress syndrome, transplantation, deep vein thrombosis,
 CC hepatitis-induced thrombocytopenia, sickle cell disease, thalassemia, viral
 CC hemorrhagic fever, thrombotic thrombocytopenic purpura, and hemolytic
 CC uremic syndrome, and also useful for treating thrombotic disorders and
 CC acute coronary syndromes such as myocardial infarction, unstable angina,
 CC and stroke. Protein C derivatives with amino acid substitutions result in
 CC increased resistance to inactivation by serpins when compared to wild-

CC type activated human protein C. They also have longer half-lives in human
 CC blood and hence require either less frequent administration and/or
 CC smaller dosage than wild type human protein C for treating disorders
 XX
 SQ Sequence 419 AA;

Query Match 99.6%; Score 2315; DB 4; Length 419;
 Best Local Similarity 99.5%; Pred. No. 1.2e-142;
 Matches 417; Conservative 1; Mismatches 1; Indels 0; Gaps 0;

QY 1 ANSPLEELRHSLEECIEECIDFEBAKEIFQVDDTLAFMSKHVDGQCLVPLEHPCA 60
 DB 1 ANSPLEELRHSLEECIEECIDFEBAKEIFQVDDTLAFMSKHVDGQCLVPLEHPCA 60
 QY 61 SLCCGHTGCTIDISGFSDDCRSGMEGRFCQREVSFLNCSLDNGGCTHYCLEEYGMRRGSC 120
 DB 61 SLCCGHTGCTIDISGFSDDCRSGMEGRFCQREVSFLNCSLDNGGCTHYCLEEYGMRRGSC 120
 QY 121 APGYKLGDDLLQCHPAVFPQGRPMKMEKKSHLKRDTEDOEDQVDFRLIDGKMTRRGD 180
 DB 121 APGYKLGDDLLQCHPAVFPQGRPMKMEKKSHLKRDTEDOEDQVDFRLIDGKMTRRGD 180
 QY 181 SPWQVVLDSKKKLAAGAVLIHPSWVLTAAHCDMSKKLLVRLGEYDRLRMEKWLDDI 240
 DB 181 SPWQVVLDSKKKLAAGAVLIHPSWVLTAAHCDMSKKLLVRLGEYDRLRMEKWLDDI 240
 QY 241 KEVFPVHNYSKSTTNDIALHLAOPATLSQTVPICLPDSGLAEKRLNQGSETLVYGM 300
 DB 241 KEVFPVHNYSKSTTNDIALHLAOPATLSQTVPICLPDSGLAEKRLNQGSETLVYGM 300
 QY 301 GYHSSREKAKENRTFVNFIKIPVPNHNCSEVMSNMVSENNLCAGILGRDQACGDS 360
 DB 301 GYHSSREKAKENRTFVNFIKIPVPNHNCSEVMSNMVSENNLCAGILGRDQACGDS 360
 QY 361 GGPVVASFHGTWFLVGLVSWGEGGGLLNHYGYTTKVSRYLDMTHGHIRDKAPQKSWAP 419
 DB 361 GGPVVASFHGTWFLVGLVSWGEGGGLLNHYGYTTKVSRYLDMTHGHIRDKAPQKSWAP 419

RESULT 52

AAU99008
 ID AAU99008 standard; protein; 419 AA.

XX AAU99008;

XX 23-AUG-2002 (first entry)

DE Human protein C zymogen protein mutant S190N/K192T.

XX Human; Protein C; N-glycosylation; APC; activated protein C; zymogen;
 KW serum half-life; chromosome 2q13-q14; stroke; myocardial infarction;
 KW after venous thrombosis; disseminated intravascular coagulation; DIC;
 KW sepsis; septic shock; embolism; pulmonary embolism; burns; pregnancy;
 KW bone marrow transplantation; major surgery; trauma; ARDS; coagulancy;
 KW adult respiratory distress syndrome; alpha-1 antitrypsin; mutant; nuclein.

XX Homo sapiens.

OS Synthetic.

EH Key Location/Qualifiers

PT Protein 1..155

PT Peptide /label= Light_chain

PT Protein /label= Lys_Arg_dipeptide

PT Peptide /label= Heavy_chain

PT Misc-difference /label= Activation_peptide

PT Misc-difference /note= "Wild-type Ser substituted by Asn"

PT Misc-difference /note= "Wild-type Lys substituted by Thr"

EN W0200232461-A2.
 XX
 PD 25-APR-2002.
 XX
 PF 15-OCT-2001; 2001MO-DK000679.
 XX
 FR 18-OCT-2000; 2000DK-00001560.
 FR 18-OCT-2000; 2000US-0242268P.
 PR 21-JUN-2001; 2001DK-00000970.
 PR 21-JUN-2001; 2001US-0300154P.
 PA (MAXY-) MAXYGEN AFS.
 PA (MAXY-) MAXYGEN HOLDINGS LTD.
 PI Andersen KV, Pedersen AH, Freskgaard PO;
 DR WPI: 2002-489875/52.
 XX
 PT Novel conjugate useful for treating or preventing septic shock, stroke
 PT and myocardial infarction, comprises non-polypeptide group covalently
 PT attached to protein C polypeptide comprising an attachment group.
 XX
 PS Claim 9; Page: 92pp; English.
 XX
 CC The invention relates to a conjugate (I) comprising at least one non-
 CC polypeptide moiety (II) (e.g. an N-glycosyl group) covalently attached to
 CC a protein C polypeptide comprising an amino acid sequence which differs
 CC from that of a parent protein C polypeptide (III) in at least one
 CC introduced and/or at least one removed amino acid residue comprising an
 CC attachment group for the non-polypeptide group (e.g. an N-glycosylation
 CC site). Also included are (I) a variant (IV) of (III) comprising a
 CC substitution in a position (P) where (P) is an amino acid with at least
 CC 25% of its side group exposed to the surface, with the proviso that the
 CC substitution is not Thr245Ser/Ala/His/Lys/Arg/Asn/Asp/Glu/Gly/Gln/
 CC Tyr303Ser/Ala/Thr/His/Lys/Arg/Asn/Asp/Glu/Gly/Gln or Phe13Ser/Ala/Thr/
 CC His/Lys/Arg/Asn/Asp/Glu/Gly/Gln; (2) a nucleotide sequence (V) encoding
 CC (IV); (3) an expression vector (VI) comprising (V); (4) a host cell (VII)
 CC comprising (V) or (VI); (5) increasing (M2) the functional in vivo half-
 CC life of the serum half-life of a parent protein C polypeptide. The
 CC conjugates, variants and protein C proteins are useful as medicaments,
 CC and in the manufacture of medicaments for the treatment (and
 CC diagnosis/prevention) of stroke, myocardial infarction, after venous
 CC thrombosis/disseminated intravascular coagulation (DIC), sepsis, septic
 CC shock, emboli e.g. pulmonary emboli, transplantation such as bone marrow
 CC transplantation, burns, pregnancy, major surgery/trauma or adult
 CC respiratory distress syndrome (ARDS). The variant protein C has an
 CC increased resistance to activation by e.g. human plasma and alpha-1
 CC antitrypsin. The conjugates have an increased in vivo half-life,
 CC increased serum half-life, increased resistance to inhibitors, reduced
 CC renal clearance, reduced immunogenicity and/or increased bioavailability.
 CC The conjugate offers a number of advantages over the currently available
 CC APC products, including longer duration between infections, moreover, a
 CC administration of less protein, and fewer side effects. Moreover, a
 CC reduced anticoagulant activity is beneficial to reduce the risk of
 CC bleeding while maintaining the anti-inflammatory activity of APC
 CC (activated protein C) conjugates. This must be especially important when
 CC the conjugate has an extended plasma life. The gene for protein C is
 CC located on chromosome 2q13-q14. The present sequence represents a zymogen
 CC protein C variant of the invention. Note: The present sequence is not
 CC shown in the specification but was created by the indexer using the
 CC protein C sequence appearing as AAU99002 and the information in claim 9
 XX
 SQ Sequence 419 AA;
 Query Match 99.6%; Score 2315; DB 5; Length 419;
 Best Local Similarity 99.5%; Pred. No. 1.2e-142;
 Matches 417; Conservative 1; Mismatches 1; Indels 0; Gaps 0;
 QY 1 ANSLFELIRSSLEECRETRCPPEKKEIRFONVDTLAFKSHVGGDQCVLPLEPQA 60
 DB 1 ANSLFELIRSSLEECRETRCPPEKKEIRFONVDTLAFKSHVGGDQCVLPLEPQA 60
 QY 61 SLCCGGTCTIDGIGSSCDRCRSGMGRFCQREVSFLNCSLDNGGCTHYCEBVGWRRCSC 120

DB 61 SLCCGGTCTIDGIGSSCDRCRSGMGRFCQREVSFLNCSLDNGGCTHYCEBVGWRRCSC 120
 QY 121 APEYKLGDDLLQCHPAVKEPCGRPWKMEKKRSHLRDTEDQEDQVDPRLIDSKYTRGD 180
 DB 121 APEYKLGDDLLQCHPAVKEPCGRPWKMEKKRSHLRDTEDQEDQVDPRLIDSKYTRGD 180
 QY 181 SPQVAVLLDSKKKLAGAVLTHPSVWTLAAHCDKESKLLVTLGEYDLRWEMKMLDLDI 240
 DB 181 SPQVAVLLDSKKKLAGAVLTHPSVWTLAAHCDKESKLLVTLGEYDLRWEMKMLDLDI 240
 QY 241 KEVFEHPSYKSTNDNDIALHLAOPATLSQTYVPCLPDSGLARELDAQGETLYTGM 300
 DB 241 KEVFEHPSYKSTNDNDIALHLAOPATLSQTYVPCLPDSGLARELDAQGETLYTGM 300
 QY 301 GYHSREKARNRTPVLANFKIPVPHNCESEVSNMVSNNMLCAGILDRODAEGDS 360
 DB 301 GYHSREKARNRTPVLANFKIPVPHNCESEVSNMVSNNMLCAGILDRODAEGDS 360
 QY 361 GGMVNASPHGTWFLVGVSWGEGGLLNQVYTKVSRYLDMHGHIRDKRAPQKSNAP 419
 DB 361 GGMVNASPHGTWFLVGVSWGEGGLLNQVYTKVSRYLDMHGHIRDKRAPQKSNAP 419

RESULT 53

AAU99049
 ID AAU99049 standard; protein: 419 AA.
 AC
 AC AAU99049;
 DT 23-AUG-2002 (first entry)
 DE Human Protein C zymogen protein mutant S304N/R306S.
 XX
 XX Human; Protein C; N-glycosylation; APC; activated protein C; zymogen;
 KM serum half-life; chromosome 2q13-q14; stroke; myocardial infarction;
 KM after venous thrombosis; disseminated intravascular coagulation; DIC;
 KM sepsis; septic shock; embolism; pulmonary embolism; burn; pregnancy;
 KM bone marrow transplantation; major surgery; trauma; ARDS; coagulant;
 KM adult respiratory distress syndrome; alpha-1 antitrypsin; mutant; mutein.
 XX
 OS Homo sapiens.
 OS Synthetic.
 XX
 PH Key location/Qualifiers
 FT Protein 1..155
 FT Peptide /label= Light_chain
 FT Peptide /label= Lys_Arg_dipeptide
 FT Protein /label= Heavy_chain
 FT Peptide /label= 158..169
 FT Peptide /label= Activation_peptide
 FT MISC-difference 304 /note= "wild-type Ser substituted by Asn"
 FT MISC-difference 306 /note= "wild-type Arg substituted by Ser"
 FT FT
 XX W0200232461-A2.
 PD 25-APR-2002.
 PF 15-OCT-2001; 2001MO-DK000679.
 PR 18-OCT-2000; 2000DK-00001560.
 PR 18-OCT-2000; 2000US-0242268P.
 PR 21-JUN-2001; 2001DK-00000970.
 PR 21-JUN-2001; 2001US-0300154P.
 PA (MAXY-) MAXYGEN AFS.
 PA (MAXY-) MAXYGEN HOLDINGS LTD.
 PI Andersen KV, Pedersen AH, Freskgaard PO;

XX MPI; 2002-489875/52.
 XX Novel conjugate useful for treating or preventing septic shock, stroke
 PT and myocardial infarction, comprises non-polypeptide group covalently
 PT attached to protein C polypeptide comprising an attachment group.
 XX
 PS Claim 9; Page; 92pp; English.

XX The invention relates to a conjugate (I) comprising at least one non-
 CC polypeptide moiety (II) (e.g. an N-glycosyl group) covalently attached to
 CC a protein C polypeptide comprising an amino acid sequence which differs
 CC from that of a parent protein C polypeptide (III) in at least one
 CC introduced and/or at least one removed amino acid residue comprising an
 CC attachment group for the non-polypeptide group (e.g. an N-glycosylation
 CC site). Also included are (1) a variant (IV) of (III) comprising a
 CC substitution in a position (P) where (P) is an amino acid with at least
 CC 25% of its side group exposed to the surface, with the proviso that the
 CC substitution is not Thr245Ser/Ala/His/Lys/Arg/Glu/Gln or Phe166Ser/Ala/Thr/
 CC Tyr102Ser/Ala/Thr/His/Lys/Arg/Asn/Asp/Glu/Gly/Gln or Phe166Ser/Ala/Thr/
 CC His/Lys/Arg/Asn/Asp/Glu/Gly/Gln; (2) a nucleotide sequence (V) encoding
 CC (IV); (3) an expression vector (VI) comprising (V); (4) a host cell (VII)
 CC comprising (V) or (VI); (5) increasing (W2) the functional in vivo half-
 CC life or the serum half-life of a parent protein C polypeptide. The
 CC conjugates, variants and protein C proteins are useful as medicaments,
 CC and in the manufacture of medicaments for the treatment (and
 CC diagnosis/prevention) of stroke, myocardial infarction, after venous
 CC thrombosis, disseminated intravascular coagulation (DIC), sepsis, septic
 CC shock, emboli e.g. pulmonary emboli, transplantation such as bone marrow
 CC transplantation, burns, pregnancy, major surgery/trauma or adult
 CC respiratory distress syndrome (ARDS). The variant protein C has an
 CC increased resistance to activation by e.g. human plasma and alpha-1
 CC antitrypsin. The conjugates have an increased in vivo half-life,
 CC increased serum half-life, increased resistance to inhibitors, reduced
 CC renal clearance, reduced immunogenicity and/or increased bioavailability.
 CC The conjugate offers a number of advantages over the currently available
 CC APC products, including longer duration between injections,
 CC administration of less protein, and fewer side effects. Moreover, a
 CC reduced anticoagulant activity is beneficial to reduce the risk of
 CC bleeding while maintaining the antiinflammatory activity of APC
 CC (activated protein C) conjugates. This must be especially important when
 CC the conjugate has an extended plasma life. The gene for protein C is
 CC located on chromosome 2q13-q14. The present sequence represents a zymogen
 CC protein C variant of the invention. Note: The present sequence is not
 CC shown in the specification but was created by the indexer using the
 CC protein C sequence appearing as AAU99002 and the information in claim 9
 CC
 XX
 SQ Sequence 419 AA:

Query Match 99.6%; Score 2315; DB 5; Length 419;
 Best Local Similarity 99.5%; Pred. No. 1, 2e-142;
 Matches 417; Conservative 1; Mismatches 1; Indels 0; Gaps 0;

QY 1 ANSPLEELRHSLIERCEIEICDEEAKELFQNVDTTAFMSKHVDGDCVLPLEHPCA 60
 DB 1 ANSPLEELRHSLIERCEIEICDEEAKELFQNVDTTAFMSKHVDGDCVLPLEHPCA 60
 QY 61 STCGHGTCIDTIGSTGSDCRSGWEGRFQREVSFLNCSLNGSCYHCLGEVGRBRCSC 120
 DB 61 STCGHGTCIDTIGSTGSDCRSGWEGRFQREVSFLNCSLNGSCYHCLGEVGRBRCSC 120
 QY 121 APGYLGDLLQCHPAVKEPCGRPMKMEKKSHLKRDTDEQEDVDLPRLIDGKWTGRGD 180
 DB 121 APGYLGDLLQCHPAVKEPCGRPMKMEKKSHLKRDTDEQEDVDLPRLIDGKWTGRGD 180
 QY 181 SPWQVTLDSKKLAAGAVLTPSVTLTAHCKMDSKGLVRLGEYDLERMKATLDDI 240
 DB 181 SPWQVTLDSKKLAAGAVLTPSVTLTAHCKMDSKGLVRLGEYDLERMKATLDDI 240
 QY 241 KEVFHPVYSKTTDDIALHLAOPATLSQTTVPICLPDSGALREELNQAQOETLVYGV 300
 DB 241 KEVFHPVYSKTTDDIALHLAOPATLSQTTVPICLPDSGALREELNQAQOETLVYGV 300

QY 301 GYHSSREKAKNRTEVLNFIKIPVPEHNCSEWASNNVSNLCAGITLGDRODACEGDS 360
 DB 301 GYHSSREKAKNRTEVLNFIKIPVPEHNCSEWASNNVSNLCAGITLGDRODACEGDS 360
 QY 361 GGPVVASFHCWTFELVGLVSKGEGCLLNHYGYTYTQVSRYLDMTHGHTDKAPQKSNAP 419
 DB 361 GGPVVASFHCWTFELVGLVSKGEGCLLNHYGYTYTQVSRYLDMTHGHTDKAPQKSNAP 419

RESULT 54

AAU99072 standard; protein; 419 AA.

AAU99072;

23-ARG-2002 (first entry)

Human Protein C zymogen protein mutant S336N/M336T.

Human; Protein C; N-glycosylation; APC; activated protein C; zymogen;
 serum half-life; chromosome 2q13-q14; stroke; myocardial infarction;
 after venous thrombosis; disseminated intravascular coagulation; DIC;
 sepsis; septic shock; embolism; pulmonary embolism; burn; pregnancy;
 bone marrow transplantation; major surgery; trauma; ARDS; coagulant;
 adult respiratory distress syndrome; alpha-1 antitrypsin; mutant; mutein.

Homo sapiens.
 Synthetic.

Key Location/Qualifiers

Protein 1..155

Peptide /label= Light_chain

Protein /label= Lys_Arg_dipeptide

Peptide /label= Heavy_chain

Misc-difference 336 /label= Activation_peptide

Misc-difference 338 /note= "Wild-type Ser substituted by Asn"

Misc-difference 338 /note= "Wild-type Met substituted by Thr"

MO200232461-A2.

25-APR-2002.

15-OCT-2001; 2001MO-DK000679.

18-OCT-2000; 2000DK-00001560.

18-OCT-2000; 2000US-0242268P.

21-JUN-2001; 2001DK-00000970.

21-JUN-2001; 2001US-0300154P.

(MAXY-) MAXYGEN APS.

(MAXY-) MAXYGEN HOLDINGS LTD.

Andersen KV, Pedersen AH, Freskgaard PO;

MP1; 2002-489875/52.

Novel conjugate useful for treating or preventing septic shock, stroke

and myocardial infarction, comprises non-polypeptide group covalently

attached to protein C polypeptide comprising an attachment group.

Claim 9; Page; 92pp; English.

The invention relates to a conjugate (I) comprising at least one non-
 CC polypeptide moiety (II) (e.g. an N-glycosyl group) covalently attached to
 CC a protein C polypeptide comprising an amino acid sequence which differs
 CC from that of a parent protein C polypeptide (III) in at least one
 CC introduced and/or at least one removed amino acid residue comprising an
 CC attachment group for the non-polypeptide group (e.g. an N-glycosylation

CC respiratory distress syndrome (ARDS). The variant protein C has an
 CC increased resistance to activation by e.g. human plasma and alpha-1
 CC antitrypsin. The conjugates have an increased in vivo half-life,
 CC increased serum half-life, increased resistance to inhibitors, reduced
 CC renal clearance, reduced immunogenicity and/or increased bioavailability.
 CC The conjugate offers a number of advantages over the currently available
 CC APC products, including longer duration between injections,
 CC administration of less protein, and fewer side effects. Moreover, a
 CC reduced anticoagulant activity is beneficial to reduce the risk of
 CC bleeding while maintaining the antithrombotic activity of APC
 CC (activated protein C) conjugates. This must be especially important when
 CC the conjugate has an extended plasma life. The gene for protein C is
 CC located on chromosome 2q13-q14. The present sequence represents a zymogen
 CC protein C variant of the invention. Note: The present sequence is not
 CC shown in the specification but was created by the indexer using the
 CC protein C sequence appearing as AAU9902 and the information in claim 9
 XX
 XX
 SQ Sequence 419 AA;

Query Match 99.6%; Score 2315; DB 5; Length 419;
 Best Local Similarity 99.5%; Pred. No. 1.2e-142;
 Matches 417; Conservative 1; Mismatches 1; Indels 0; Gaps 0;

QY 1 ANSFLERLRSSLEKECTEIEICPEEAKETIFQNVDTLAFWSKHVDSQCLVLEPAPCA 60
 Db 1 ANSFLERLRSSLEKECTEIEICPEEAKETIFQNVDTLAFWSKHVDSQCLVLEPAPCA 60
 QY 61 SLCCGAGTCIDIGSFSCDCRSWESEAFQREVSFLNCSLDNGGCTHYCLEBVGMRKCSG 120
 Db 61 SLCCGAGTCIDIGSFSCDCRSWESEAFQREVSFLNCSLDNGGCTHYCLEBVGMRKCSG 120
 QY 121 APGYKLDLLOCHPAVFPKGRPWKMEKESSHKXPTDEQEDVDPLIDGMATRRGD 180
 Db 121 APGYKLDLLOCHPAVFPKGRPWKMEKESSHKXPTDEQEDVDPLIDGMATRRGD 180
 QY 121 APGYKLDLLOCHPAVFPKGRPWKMEKESSHKXPTDEQEDVDPLIDGMATRRGD 180
 Db 121 APGYKLDLLOCHPAVFPKGRPWKMEKESSHKXPTDEQEDVDPLIDGMATRRGD 180
 QY 181 SPMQVLLDSEKKLACGAVLIHPSWVLIHAHQMDSEKKLIVRLGEYDLRWEKVELDLDI 240
 Db 181 SPMQVLLDSEKKLACGAVLIHPSWVLIHAHQMDSEKKLIVRLGEYDLRWEKVELDLDI 240
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 QY 361 GGPWVASFHGTWFLVGLVSWGSGGLLHNVGYTVKVSRYLDWIHGRDKAPKSNAP 419
 Db 361 GGPWVASFHGTWFLVGLVSWGSGGLLHNVGYTVKVSRYLDWIHGRDKAPKSNAP 419

RESULT 56
 AAU99020
 ID AAU99020 standard; protein; 419 AA.
 XX
 AC AAU99020;
 XX
 DT 23-AUG-2002 (first entry)
 XX
 DE Human Protein C zymogen protein mutant S216N/K218T.
 XX
 KM Human, Protein C; N-glycosylation; APC; activated protein C; zymogen;
 KM serum half-life; chromosome 2q13-q14; stroke; myocardial infarction;
 KM after venous thrombosis; disseminated intravascular coagulation; DIC;
 KM septic shock; embolism; pulmonary embolism; burn; pregnancy;
 KM bone marrow transplantation; major surgery; trauma; ARDS; coagulant;
 KM adult respiratory distress syndrome; alpha-1 antitrypsin; mutant; mutein.
 OS Homo sapiens.
 OS Synthetic.
 XX
 FH Key Location/Qualifiers

FT Protein 1..155
 FT /label= Light_chain
 FT Peptide 156..157
 FT /label= Lys_Arg_dipeptide
 FT Protein 158..419
 FT /label= Heavy_chain
 FT Peptide 158..169
 FT /label= Activation_peptide
 FT Misc-difference 216
 FT /note= "wild-type Ser substituted by Asn"
 FT Misc-difference 218
 FT /note= "wild-type Lys substituted by Thr"
 XX
 XX W0200232461-A2.
 XX
 XX 25-APR-2002.
 XX
 XX 15-OCT-2001; 2001WO-DK00679.
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 XX 18-OCT-2000; 2000DK-00001560.
 XX 18-OCT-2000; 2000US-0242268P.
 XX 21-JUN-2001; 2001DK-00000970.
 XX 21-JUN-2001; 2001US-0300154P.
 XX
 XX (MAXY-) MAXYGEN APS.
 XX (MAXY-) MAXYGEN HOLDINGS LTD.
 XX
 XX Andersen KV, Pedersen AH, Freskgaard PO;
 XX WPI; 2002-489675/52.
 XX
 PT Novel conjugate useful for treating or preventing septic shock, stroke
 PT and myocardial infarction, comprises non-polypeptide group covalently
 PT attached to protein C polypeptide comprising an attachment group.
 XX
 XX Claim 9; Page; 92pp; English.
 PS
 XX
 XX The invention relates to a conjugate (I) comprising at least one non-
 XX polypeptide moiety (II) (e.g. an N-glycosyl group) covalently attached to
 XX a protein C polypeptide comprising an amino acid sequence which differs
 XX from that of a parent protein C polypeptide (III) in at least one
 XX introduced and/or at least one removed amino acid residue comprising an
 XX attachment group for the non-polypeptide group (e.g. an N-glycosylation
 XX site). Also included are (1) a variant (IV) of (II) comprising a
 XX substitution in a position (P) where (P) is an amino acid with at least
 XX 25% of its side group exposed to the surface, with the proviso that the
 XX substitution is not Thr245Ser/Ala/His/Lys/Arg/Asn/Asp/Glu/Gly/Gln,
 XX Tyr303Ser/Ala/Thr/His/Lys/Arg/Asn/Asp/Glu/Gly/Gln or Phe316Ser/Ala/Thr/
 XX His/Lys/Arg/Asp/Asp/Glu/Gly/Gln; (2) a nucleotide sequence (V) encoding
 XX (IV); (3) an expression vector (VI) comprising (V); (4) a host cell (VII)
 XX comprising (V) or (VI); (5) increasing (M2) the functional in vivo half-
 XX life or the serum half-life of a parent protein C polypeptide. The
 XX conjugates, variants and protein C proteins are useful as medicaments,
 XX and in the manufacture of medicaments for the treatment (and
 XX diagnosis/prevention) of stroke, myocardial infarction, after venous
 XX thrombosis, disseminated intravascular coagulation (DIC), sepsis, septic
 XX shock, emboli e.g. pulmonary emboli, transplantation such as bone marrow
 XX transplantation, burns, pregnancy, major surgery/trauma or adult
 XX respiratory distress syndrome (ARDS). The variant protein C has an
 XX increased resistance to activation by e.g. human plasma and alpha-1
 XX antitrypsin. The conjugates have an increased in vivo half-life,
 XX increased serum half-life, increased resistance to inhibitors, reduced
 XX renal clearance, reduced immunogenicity and/or increased bioavailability.
 XX The conjugate offers a number of advantages over the currently available
 XX APC products, including longer duration between injections,
 XX administration of less protein, and fewer side effects. Moreover, a
 XX reduced anticoagulant activity is beneficial to reduce the risk of
 XX bleeding while maintaining the antithrombotic activity of APC
 XX (activated protein C) conjugates. This must be especially important when
 XX the conjugate has an extended plasma life. The gene for protein C is
 XX located on chromosome 2q13-q14. The present sequence represents a zymogen
 XX protein C variant of the invention. Note: The present sequence is not
 XX shown in the specification but was created by the indexer using the

XX	25-Apr-2002.
PF	15-Oct-2001; 2001WO-DK000679.
PR	18-Oct-2000; 2000DK-00001560.
PR	18-Oct-2000; 2000US-0242266P.
PR	21-Jun-2001; 2001DK-0000970.
PR	21-Jun-2001; 2001US-0300154P.
XX	(MAXY-) MAXYGEN APS.
PA	(MAXY-) MAXYGEN HOLDINGS LTD.
PA	(MAXY-) MAXYGEN HOLDINGS LTD.
PI	Andersen XV, Pedersen AH, Friesgaard PO,
DR	WFI; 2002-489875/52.
XX	
PT	Novel conjugate useful for treating or preventing septic shock, stroke
PT	and myocardial infarction, comprises non-polypeptide group covalently
PT	attached to protein C polypeptide comprising an attachment group.
PS	Claim 9; Page; 92pp; English.
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CC	The invention relates to a conjugate (I) comprising at least one non-
CC	polypeptide moiety (II) (e.g. an N-glycosyl group) covalently attached to
CC	a protein C polypeptide comprising an amino acid sequence which differs
CC	from that of a parent protein C polypeptide (III) in at least one
CC	introduced group and/or at least one removed amino acid residue comprising an
CC	attachment group for the non-polypeptide group (e.g. an N-glycosylation
CC	site). Also included are (1) a variant (IV) of (III) comprising a
CC	substitution in a position (P) where (P) is an amino acid with at least
CC	25% of its side group exposed to the surface, with the proviso that the
CC	substitution is not Thr245Ser/Ala/His/Lys/Arg/Asn/Asp/Glu/Gly/Gln,
CC	Tyr102Ser/Ala/Thr/His/Lys/Asp/Asn/Asp/Glu/Gly/Gln or Phe165Ser/Ala/Thr/
CC	His/Lys/Arg/Asn/Asp/Glu/Gly/Gln; (2) a nucleotide sequence (V) encoding
CC	(IV); (3) an expression vector (VI) comprising (V); (4) a host cell (VII)
CC	comprising (V) or (VI); (5) increasing (M2) the functional in vivo half-
CC	life of the serum half-life of a parent protein C polypeptide. The
CC	conjugates, variants and protein C proteins are useful as medicaments,
CC	and in the manufacture of medicaments for the treatment (and
CC	diagnosis/prevention) of stroke, myocardial infarction, after venous
CC	thrombosis, disseminated intravascular coagulation (DIC), sepsis, septic
CC	shock, emboli e.g. pulmonary emboli, transplantation such as bone marrow
CC	transplantation, burns, pregnancy, major surgery/trauma or adult
CC	respiratory distress syndrome (ARDS). The variant protein C has an
CC	increased resistance to activation by e.g. human plasma and alpha-1
CC	antitrypsin. The conjugates have an increased in vivo half-life,
CC	increased serum half-life, increased resistant to inhibitors, reduced
CC	renal clearance, reduced immunogenicity and/or increased bioavailability.
CC	The conjugate offers a number of advantages over the currently available
CC	APC products, including longer duration between injections,
CC	administration of less protein, and fewer side effects. Moreover, a
CC	reduced anticoagulant activity is beneficial to reduce the risk of
CC	bleeding while maintaining the anti-inflammatory activity of APC
CC	(activated protein C) conjugates. This must be especially important when
CC	the conjugate has an extended plasma life. The gene for protein C is
CC	located on chromosome 2q13-q14. The present sequence represents a zymogen
CC	protein C variant of the invention. Note: The present sequence is not
CC	shown in the specification but was created by the indexer using the
CC	protein C sequence appearing as AAU99002 and the information in claim 9
XX	
SQ	Sequence 419 AA;
Query Match	99.6%; Score 2315; DB 5; Length 419;
Best Local Similarity	99.5%; Pred. No. 1,26-142;
Matches 417; Conservative	0; Mismatches 2; Indels 0; Gaps 0
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D6	1 ANSFLEELRISSLSRECBCEICDFEFAKEIQNVDDTLAFNSKAYDSDGCVLPLEHPCA 60
D6	61 SLCCGHGTCTIDIGISFSCDCRSWMEFCRCRRVSFLNCSLDNGACHTYCLAEYGWRARSC 120
D6	61 SLCCGHGTCTIDIGISFSCDCRSWMEFCRCRRVSFLNCSLDNGACHTYCLAEYGWRARSC 120

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OY 121 APGYKGLDGLLQCHPAVPCGPRPMKMEKSKSHKPTDEPOEDVDRLIDGKMYTRGD 180
DB 121 APGYKGLDGLLQCHPAVPCGPRPMKMEKSKSHKPTDEPOEDVDRLIDGKMYTRGD 180
OY 181 SPQGVYVLLDSKKKLAGAVLHPSWVLTAAHCMDSESKLVLRLGEYDLRRMEKVELDLDI 240
DB 181 SPQGVYVLLDSKKKLAGAVLHPSWVLTAAHCMDSESKLVLRLGEYDLRRMEKVELDLDI 240
OY 241 KEVFPVHPNYSKSTTNDIALHLAOPATLSQTTVPICLPDSGLAEHELNOAGQETLVYGM 300
DB 241 KEVFPVHPNYSKSTTNDIALHLAOPATLSQTTVPICLPDSGLAEHELNOAGQETLVYGM 300
OY 301 GYHSSREKEAKRRTFVNLFIKIPVPHNECEWMSNMVSENNLCAGILGRDQACGSDS 360
DB 301 GYHSSREKEAKRRTFVNLFIKIPVPHNECEWMSNMVSENNLCAGILGRDQACGSDS 360
OY 361 GGPVYASFHGTWFLVGLVSWGCGLLHNYGVYTVKSYLDMIGHIRDKKAPQKSNAP 419
DB 361 GGPVYASFHGTWFLVGLVSWGCGLLHNYGVYTVKSYLDMIGHIRDKKAPQKSNAP 419

RESULT 58
AAU99071
ID AAU99071 standard; protein; 419 AA.
AC AAU99071;
XX
XX 23-AUG-2002 (first entry)
DE Human Protein C zymogen protein mutant S336N/M338S.
XX
XX Human; Protein C; N-glycosylation; APC; activated protein C; zymogen;
XX serum half-life; chromosome 2q13-q14; stroke; myocardial infarction;
XX after venous thrombosis; disseminated intravascular coagulation; DIC;
XX sepsis; septic shock; embolism; pulmonary embolism; burn; pregnancy;
XX bone marrow transplantation; major surgery; trauma; ARDS; coagulant;
XX adult respiratory distress syndrome; alpha-1 antitrypsin; mutant; mutein.
XX
OS Homo sapiens.
XX Synthetic.
XX
FH Key Location/Qualifiers
FT Protein 1..155
FT Peptide 156..157
FT Protein 158..419
FT Peptide 158..169
FT Peptide /label= Heavy_chain
FT Peptide /label= Activation_peptide
FT Misc-difference 336
FT Misc-difference /note= "Wild-type Ser substituted by Asn"
FT Misc-difference 338
FT Misc-difference /note= "Wild-type Met substituted by Ser"
XX
XX WO200232461-A2.
XX
XX 25-APR-2002.
XX
XX 15-OCT-2001; 2001WO-DK00679.
XX
XX 18-OCT-2000; 2000DK-00001560.
XX 18-OCT-2000; 2000US-0242268P.
XX 21-JUN-2001; 2001DK-00000970.
XX 21-JUN-2001; 2001US-03000154P.
XX
XX (MAXY-) MAXYGEN APS.
XX PA (MAXY-) MAXYGEN HOLDINGS LTD.
XX PI Andersen KV, Pedersen AH, Friesgaard PO;
XX WPI, 2002-489875/52.

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XX
PT Novel conjugate useful for treating or preventing septic shock, stroke
PT and myocardial infarction, comprises non-polypeptide group covalently
PT attached to protein C polypeptide comprising an attachment group.
XX
PS Claim 9; Page; 92pp; English.
XX
CC The invention relates to a conjugate (I) comprising at least one non-
CC polypeptide moiety (II) (e.g. an N-glycosyl group) covalently attached to
CC a protein C polypeptide comprising an amino acid sequence which differs
CC from that of a parent protein C polypeptide (III) in at least one
CC introduced and/or at least one removed amino acid residue comprising an
CC attachment group for the non-polypeptide group (e.g. an N-glycosylation
CC site). Also included are (1) a variant (IV) of (III) comprising a
CC substitution in a position (P) where (P) is an amino acid with at least
CC 25% of its side group exposed to the surface, with the proviso that the
CC substitution is not Thr245Ser/Ala/His/Lys/Arg/Asn/Asp/Glu/Gly/Gln,
CC Tyr305Ser/Ala/His/Lys/Arg/Asn/Asp/Glu/Gly/Gln or Phe315Ser/Ala/Thr/
CC His/Lys/Arg/Asn/Asp/Glu/Gly/Gln; (2) a nucleotide sequence (V) encoding
CC (IV); (3) an expression vector (VI) comprising (V); (4) a host cell (VII)
CC comprising (V) or (VI); (5) increasing (M2) the functional in vivo half-
CC life or the serum half-life of a parent protein C polypeptide. The
CC conjugates, variants and protein C proteins are useful as medicaments,
CC and in the manufacture of medicaments for the treatment (and
CC diagnosis/prevention) of stroke, myocardial infarction, after venous
CC thrombosis, disseminated intravascular coagulation (DIC), sepsis, septic
CC shock, emboli e.g. pulmonary emboli, transplantation such as bone marrow
CC transplantation, burns, pregnancy, major surgery/trauma or adult
CC respiratory distress syndrome (ARDS). The variant protein C has an
CC increased resistance to activation by e.g. human plasma and alpha-1
CC antitrypsin. The conjugates have an increased in vivo half-life,
CC increased serum half-life, increased resistance to inhibitors, reduced
CC renal clearance, reduced immunogenicity and/or increased bioavailability.
CC The conjugate offers a number of advantages over the currently available
CC APC products, including longer duration between infusions,
CC administration of less protein, and fewer side effects. Moreover, a
CC reduced anticoagulant activity is beneficial to reduce the risk of
CC bleeding while maintaining the antiinflammatory activity of APC
CC (activated protein C) conjugates. This must be especially important when
CC the conjugate has an extended plasma life. The gene for protein C is
CC located on chromosome 2q13-q14. The present sequence represents a zymogen
CC protein C variant of the invention. Note: The present sequence is not
CC shown in the specification but was created by the indexer using the
CC protein C sequence appearing as AAU99002 and the information in claim 9
XX
SQ Sequence 419 AA.
XX
Query Match 99.6%; Score 2315; DB 5; Length 419;
Best Local Similarity 99.5%; Pred. No. 1, 2e-142;
Matches 417; Conservative 1; Mismatches 1; Indels 0; Gaps 0;

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Query	121 APGYKIGDILLCPHAYKFCQGPWKMEKKRSHLKQETPEQVDPPLDGGKTRRGD 180				
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DE Human Protein C zymogen protein mutant Y302N.
 XX
 KW Human: Protein C; N-glycosylation; APC; activated protein C; zymogen;
 KW serum half-life; chromosome 2q13-q14; stroke; myocardial infarction;
 KW after venous thrombosis; disseminated intravascular coagulation; DIC;
 KW sepsis; septic shock; embolism; pulmonary embolism; burn; pregnancy;
 KW bone marrow transplantation; major surgery; trauma; ARDS; coagulant;
 KW adult respiratory distress syndrome; alpha-1 antitrypsin; mutant; mutein.
 XX
 OS Homo sapiens.
 OS Synthetic.
 XX
 XX Key Location/Qualifiers
 XX Protein 1..155
 FT Peptide /label= Light_chain
 FT 156..157
 FT Protein /label= Lys_Arg_dipeptide
 FT 158..419
 FT Peptide /label= Heavy_chain
 FT 158..169
 FT Misc-difference 302 /note= "Wild-type Tyr substituted by Asn"
 FT
 XX MO200232461-A2.
 XX 25-APR-2002.
 XX 15-OCT-2001; 2001MO-DK000679.
 XX 18-OCT-2000; 2000DK-00001560.
 XX 18-OCT-2000; 2000US-0242268P.
 XX 21-JUN-2001; 2001DK-0000970.
 XX 21-JUN-2001; 2001US-0300154P.
 XX
 XX (MAXT-) MAXGEN ABS.
 XX (MAXT-) MAXGEN HOLDINGS LTD.
 XX
 XX Andersen KV, Pedersen AH, Freskgaard PO;
 XX WPI; 2002-489875/52.
 XX
 XX Novel conjugate useful for treating or preventing septic shock, stroke
 XX and myocardial infarction, comprises non-polypeptide group covalently
 XX attached to protein C polypeptide comprising an attachment group.
 XX
 XX Claim 9; Page: 92pp; English.
 XX
 CC The invention relates to a conjugate (I) comprising at least one non-
 CC polypeptide moiety (II) (e.g. an N-glycosyl group) covalently attached to
 CC a protein C polypeptide comprising an amino acid sequence which differs
 CC from that of a parent protein C polypeptide (III) in at least one
 CC introduced and/or at least one removed amino acid residue comprising an
 CC attachment group for the non-polypeptide group (e.g. an N-glycosylation
 CC site). Also included are (I) a variant (IV) of (III) comprising a
 CC substitution in a position (P) where (P) is an amino acid with at least
 CC 25% of its side group exposed to the surface, with the proviso that the
 CC substitution is not Thr245Ser/Ala/His/Lys/Arg/Asn/Asp/Glu/Gly/Gln,
 CC Tyr302Ser/Ala/Thr/His/Lys/Arg/Asn/Asp/Glu/Gly/Gln or Phe318Ser/Ala/Thr/
 CC His/Lys/Arg/Asn/Asp/Glu/Gly/Gln; (2) a nucleotide sequence (V) encoding
 CC (IV); (3) an expression vector (VI) comprising (V); (4) a host cell (VII)
 CC comprising (V) or (VI); (5) increasing (W2) the functional in vivo half-
 CC life or the serum half-life of a parent protein C polypeptide. The
 CC conjugates, variants and protein C proteins are useful as medicaments,
 CC and in the manufacture of medicaments for the treatment (and
 CC diagnosis/prevention) of stroke, myocardial infarction, after venous
 CC thrombosis, disseminated intravascular coagulation (DIC), sepsis, septic
 CC shock, emboli e.g. pulmonary emboli, transplantation such as bone marrow
 CC transplantation, burns, pregnancy, major surgery/trauma or adult
 CC respiratory distress syndrome (ARDS). The variant protein C has an
 CC increased resistance to activation by e.g. human plasma and alpha-1
 CC antitrypsin. The conjugates have an increased in vivo half-life,
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CC renal clearance, reduced immunogenicity and/or increased bioavailability.
 CC The conjugate offers a number of advantages over the currently available
 CC APC products, including longer duration between injections.
 CC administration of less protein, and fewer side effects. Moreover, a
 CC reduced anticoagulant activity is beneficial to reduce the risk of
 CC bleeding while maintaining the antiinflammatory activity of APC
 CC (activated protein C) conjugates. This must be especially important when
 CC the conjugate has an extended plasma life. The gene for protein C is
 CC located on chromosome 2q13-q14. The present sequence represents a zymogen
 CC protein C variant of the invention. Note: The present sequence is not
 CC shown in the specification but was created by the indexer using the
 CC protein C sequence appearing as AAU99002 and the information in Claim 9
 CC
 XX
 XX Sequence 419 AA;
 XX
 XX Query Match 99.6%; Score 2315; DB 5; Length 419;
 XX Best Local Similarity 99.8%; Pred. No. 1.2e-142;
 XX Matches 419; Conservative 0; Mismatches 1; Indels 0; Gaps 0;
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 DB 1 ANSFLEERHSSLERECIEICDFEAKETFOVNDOTLAFMSKHVDDQCLVPLEHPCA 60
 QY 61 SLCCGHGTCIDIGISFCDCRSGBGRFCOREVSLNCSLDNGCTCYCLEBYGMRCSG 120
 DB 61 SLCCGHGTCIDIGISFCDCRSGBGRFCOREVSLNCSLDNGCTCYCLEBYGMRCSG 120
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 QY 181 SPWQVLLDSKKKLAGAVLHPSVWLTAACHDDESKLLVLAEGYDIRMEWEJLDLI 240
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 DB 241 KEVYVHPNYSSTDDNDALHLAOPATLSQTVPCLDSCGLARELNQAGETLYGSM 300
 QY 301 GYHSSEKKAQRNRTFVNFIKIPVPHNECSEVMNMYSEMLCAGLLDRODACEGDS 360
 DB 301 GYHSSEKKAQRNRTFVNFIKIPVPHNECSEVMNMYSEMLCAGLLDRODACEGDS 360
 QY 361 GGPMVASFHGTWFLVGLVMSGCGLLHNVGYTYSRYLDMIGHIRDEYAPQKSMAP 419
 DB 361 GGPMVASFHGTWFLVGLVMSGCGLLHNVGYTYSRYLDMIGHIRDEYAPQKSMAP 419
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 XX AAU99052
 XX ID AAU99052 standard; protein: 419 AA.
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 XX AC AAU99052;
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 XX DT 23-AUG-2002 (first entry)
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 XX DE Human Protein C zymogen protein mutant S305N/E307T.
 XX
 XX KW Human: Protein C; N-glycosylation; APC; activated protein C; zymogen;
 KW serum half-life; chromosome 2q13-q14; stroke; myocardial infarction;
 KW after venous thrombosis; disseminated intravascular coagulation; DIC;
 KW sepsis; septic shock; embolism; pulmonary embolism; burn; pregnancy;
 KW bone marrow transplantation; major surgery; trauma; ARDS; coagulant;
 KW adult respiratory distress syndrome; alpha-1 antitrypsin; mutant; mutein.
 XX
 OS Homo sapiens.
 OS Synthetic.
 XX
 XX Key Location/Qualifiers
 XX Protein 1..155
 FT Peptide /label= Light_chain
 FT 156..157
 FT Peptide /label= Lys_Arg_dipeptide

FT Protein 158..419
 FT /label= Heavy_chain
 FT Peptide 158..169
 FT /label= Activation_peptide
 FT Misc-difference 305
 FT /note= "Wild-type Ser substituted by Asn"
 FT /note= 307
 FT /note= "Wild-type Glu substituted by Thr"
 XX MO200232461-A2.
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 XX 25-APR-2002.
 XX
 XX 15-OCT-2001; 2001WO-DK000679.
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 XX 18-OCT-2000; 2000DK-00001560.
 XX 18-OCT-2000; 2000US-024268P.
 XX 21-JUN-2001; 2001DR-00000970.
 XX 21-JUN-2001; 2001US-0300154P.
 XX
 XX (MAXY-) MAXYGEN ABS.
 XX (MAXY-) MAXYGEN HOLDINGS LTD.
 XX
 XX Andersen KV, Pedersen AH, Freskgaard PO;
 XX WPI; 2002-489875/52.
 XX
 PT Novel conjugate useful for treating or preventing septic shock, stroke
 PT and myocardial infarction, comprises non-polypeptide group covalently
 PT attached to protein C polypeptide comprising an attachment group.
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 CC site). Also included are (1) a variant (IV) of (III) comprising a
 CC substitution in a position (P) where (P) is an amino acid with at least
 CC 25% of its side group exposed to the surface, with the proviso that the
 CC substitution is not Thr245Ser/Ala/His/Lys/Arg/Asn/Asp/Glu/Gly/Gln,
 CC Tyr102Ser/Ala/Thr/His/Lys/Arg/Asn/Asp/Glu/Gly/Gln or Phe16Ser/Ala/Thr/
 CC His/Lys/Arg/Asn/Asp/Glu/Gly/Gln; (2) a nucleotide sequence (V) encoding
 CC (IV); (3) an expression vector (VI) comprising (V); (4) a host cell (VII)
 CC comprising (V) or (VI); (5) increasing (M2) the functional in vivo half-
 CC life or the serum half-life of a parent protein C polypeptide. The
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 CC shock, emboli e.g. pulmonary emboli, transplantation such as bone marrow
 CC transplantation, burns, pregnancy, major surgery/trauma or adult
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 CC increased resistance to activation by e.g. human plasma and alpha-1
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 CC (activated protein C) conjugates. This must be especially important when
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 CC located on chromosome 2q13-q14. The present sequence represents a zymogen
 CC protein C variant of the invention. Note: The present sequence is not
 CC shown in the specification but was created by the indexer using the
 CC protein C sequence appearing as AAU99002 and the information in claim 9
 XX
 XX Sequence 419 AA;

Query Match 99.6%; Score 2315; Ds 5; Length 419;
 Best Local Similarity 99.5%; Pred. No. 1,2e-142;
 Matches 417; Conservative 1; Mismatches 1; Indels 0; Gaps 0;

QY 1 ANSTLEELHSHSLRECEIEI CDPEAKETIQNDTDLAWSKAYDGGCLVPLEHPQA 60
 DB 1 ANSTLEELHSHSLRECEIEI CDPEAKETIQNDTDLAWSKAYDGGCLVPLEHPQA 60
 QY 61 SLCCGHTCIDLIGSFSCDRSGMEGRFCQREVSFLNCSLDNCGCTHCCEVGMRCSC 120
 DB 61 SLCCGHTCIDLIGSFSCDRSGMEGRFCQREVSFLNCSLDNCGCTHCCEVGMRCSC 120
 QY 121 APGYKLGDDLLQCHPAVYFCQGRPMKMEKRSLSHXEDTEDQYDPRLLDGKQTRRD 180
 DB 121 APGYKLGDDLLQCHPAVYFCQGRPMKMEKRSLSHXEDTEDQYDPRLLDGKQTRRD 180
 QY 161 SPWQVVLVLSKKKLLCGAVLIHPSVLTAAKCMDESKLLVRLGEVDLRRKKEMLDLDI 240
 DB 161 SPWQVVLVLSKKKLLCGAVLIHPSVLTAAKCMDESKLLVRLGEVDLRRKKEMLDLDI 240
 QY 241 KEVFPHPNYSKSTNDIATLHIAOPATLSQTIYPICLPDGSLARELNQAGQETLVGM 300
 DB 241 KEVFPHPNYSKSTNDIATLHIAOPATLSQTIYPICLPDGSLARELNQAGQETLVGM 300
 QY 301 GYHSSREKEXKXRTFVLANFKIIPVPHNECEVWSNVSNNMLCAGILGDRDACEGDS 360
 DB 301 GYHSNRTKEKXKXRTFVLANFKIIPVPHNECEVWSNVSNNMLCAGILGDRDACEGDS 360
 QY 361 GCPWVASFHGTWFLWGVSMGCGGLHNYGYVTKVRYLDMHGHIDKXAPKSNAP 419
 DB 361 GCPWVASFHGTWFLWGVSMGCGGLHNYGYVTKVRYLDMHGHIDKXAPKSNAP 419

RESULT 62
 AAU99034
 ID AAU99034 standard; protein, 419 AA.
 XX
 AC AAU99034;
 XX
 DT 23-AUG-2002 (first entry)
 XX
 DE Human Protein C zymogen protein mutant K251N/17253S.
 XX
 KW Human; Protein C; N-glycosylation; APC; activated protein C; zymogen;
 KW serum half-life; chromosome 2q13-q14; stroke; myocardial infarction;
 KW after venous thrombosis; disseminated intravascular coagulation; DIC;
 KW sepsis; septic shock; embolism; pulmonary embolism; burn; pregnancy;
 KW bone marrow transplantation; major surgery; trauma; ARDS; coagulant;
 KW adult respiratory distress syndrome; alpha-1 antitrypsin; mutant; mutein.
 XX
 OS Homo sapiens.
 OS Synthetic.
 XX
 PH Key
 PH Protein Location/Qualifiers
 FT /label= Light_chain
 FT Peptide 156..157
 FT /label= Lys_Arg_dipeptide
 FT Protein 158..419
 FT /label= Heavy_chain
 FT Peptide 158..169
 FT /label= Activation_peptide
 FT Misc-difference 251
 FT /note= "Wild-type Lys substituted by Asn"
 FT Misc-difference 253
 FT /note= "Wild-type Thr substituted by Ser"
 XX
 XX MO200232461-A2.
 XX
 XX 25-APR-2002.
 XX
 XX 15-OCT-2001; 2001WO-DK000679.
 XX

XX Claim 9; Page: 92pp; English.

CC The invention relates to a conjugate (I) comprising at least one non-
 CC polypeptide moiety (II) (e.g. an N-glycosyl group) covalently attached to
 CC a protein C polypeptide comprising an amino acid sequence which differs
 CC from that of a parent protein C polypeptide (III) in at least one
 CC introduced and/or at least one removed amino acid residue comprising an
 CC attachment group for the non-polypeptide group (e.g. an N-glycosylation
 CC site). Also included are (1) a variant (IV) of (III) comprising a
 CC substitution in a position (P) where (P) is an amino acid with at least
 CC 25% of its side group exposed to the surface, with the proviso that the
 CC substitution is not Thr245Ser/Ala/His/Lys/Arg/Glu/Asp/Gln/Gly/Ala/
 CC Tyr302Ser/Ala/Thr/His/Lys/Arg/Asn/Glu/Gly/Gln or Phe136Ser/Ala/Thr/
 CC His/Lys/Arg/Asn/Asp/Glu/Gly/Gln; (2) a nucleotide sequence (V) encoding
 CC (IV); (3) an expression vector (VI) comprising (V); (4) a host cell (VII)
 CC comprising (V) or (VI); (5) increasing (M2) the functional in vivo half-
 CC life or the serum half-life of a parent protein C polypeptide. The
 CC conjugates, variants and protein C proteins are useful as medicaments,
 CC and in the manufacture of medicaments for the treatment (and
 CC diagnosis/prevention) of stroke, myocardial infarction, after venous
 CC thrombosis, disseminated intravascular coagulation (DIC), sepsis, septic
 CC shock, emboli e.g. pulmonary emboli, transplantation such as bone marrow
 CC transplantation, burns, pregnancy, major surgery/trauma or adult
 CC respiratory distress syndrome (ARDS). The variant protein C has an
 CC increased resistance to activation by e.g. human plasma and alpha-1
 CC antitrypsin. The conjugates have an increased in vivo half-life,
 CC increased serum half-life, increased resistance to inhibitors, reduced
 CC renal clearance, reduced immunogenicity and/or increased bioavailability.
 CC The conjugate offers a number of advantages over the currently available
 CC APC products, including longer duration between injections,
 CC administration of less protein, and fewer side effects. Moreover, a
 CC reduced anticoagulant activity is beneficial to reduce the risk of
 CC bleeding while maintaining the antiinflammatory activity of APC
 CC (activated protein C) conjugates. This must be especially important when
 CC the conjugate has an extended plasma life. The gene for protein C is
 CC located on chromosome 2q13-q14. The present sequence represents a zymogen
 CC protein C variant of the invention. Note: The present sequence is not
 CC shown in the specification but was created by the indexer using the
 CC protein C sequence appearing as AAU99002 and the information in claim 9

XX Sequence 419 AA;

XX Query Match 99.6%; Score 2315; DB 5; Length 419;
 XX Best Local Similarity 99.5%; Pred. No. 1.2e-142;
 XX Matches 417; Conservative 0; Mismatches 2; Indels 0; Gaps 0;

QY 1 ANSFLEIRHSLSRECEIEICDFEAKETFQNVDDTLAFMSKHVDGQCLVPLHPCA 60
 DB 1 ANSFLEIRHSLSRECEIEICDFEAKETFQNVDDTLAFMSKHVDGQCLVPLHPCA 60
 QY 61 SICCGHGTICIDGIGSFCDCRSQSGWGRFCQREVSFLNSGLDNGGCTHYCLEVGMRRSC 120
 DB 61 SICCGHGTICIDGIGSFCDCRSQSGWGRFCQREVSFLNSGLDNGGCTHYCLEVGMRRSC 120
 QY 121 AFGYKLGDDLLQCHPAVKPCGRPWKMEKKRSHLRKDTDEDDQVDPRLIDKMTRRGD 180
 DB 121 AFGYKLGDDLLQCHPAVKPCGRPWKMEKKRSHLRKDTDEDDQVDPRLIDKMTRRGD 180
 QY 181 SPWQYVLLDSKKKLAAGAVLTHPSWVTLAAHCWDESKLLVRLAEYDLRWKEMELDDI 240
 DB 181 SPWQYVLLDSKKKLAAGAVLTHPSWVTLAAHCWDESKLLVRLAEYDLRWKEMELDDI 240
 QY 241 KEVFNHPVSKSTTDDIALHLAQPATLSQTIVPICLPDSGLARELNQAGETLVYGM 300
 DB 241 KEVFNHPVSKSTTDDIALHLAQPATLSQTIVPICLPDSGLARELNQAGETLVYGM 300
 QY 301 GHSSREKEAKRNNTFLNFIKIPVPHNCCSVNSNMYSNNLCAGIIGDRDACEBDS 360
 DB 301 GHSSREKEAKRNNTFLNFIKIPVPHNCCSVNSNMYSNNLCAGIIGDRDACEBDS 360
 QY 361 GGPWVASFHTGFWELVGLVSMGGGGLLHNYGYTVKSRYLDMIGHIRDKAEAPQKSWAP 419

DB 361 GGPWVASFHTGFWELVGLVSMGGGGLLHNYGYTVKSRYLDMIGHIRDKAEAPQKSWAP 419

RESULT 64

AAB36897

ID AAB36897 standard; protein; 419 AA.

AC AAB36897;

XX 26-FEB-2001 (first entry)

DE Human protein C derivative 4.

XX Protein C; human; vascular occlusive; burn; transplantation;

XX deep vein thrombosis; sickle cell; thalassemia; thrombotic disorders;

XX myocardial infarction; angina; stroke.

XX Homo sapiens.

PM WO20006754-A1.

PD 09-NOV-2000.

XX 13-APR-2000; 2000WO-0808722.

PR 30-APR-1999; 99US-0131801P.

PA (ELIL) LILLY & CO ELI.

PI Gerlitz BE, Jones BE;

DR WPI: 2001-007227/01.

XX N-PSDB; AAC8314.

PT Protein C derivatives, useful for treating vascular occlusive disorder,
 PT hypercoagulable state, thrombotic disorder and disease states
 PT predisposing thrombosis, comprises specific amino acid substitutions.

PS Claim 5; Page 48-49; 57pp; English.

XX The present invention relates to a human protein C derivative. The
 CC protein is useful for treating vascular occlusive disorder,
 CC hypercoagulable states such as sepsis, disseminated intravascular
 CC coagulation, purpura fulminans, major trauma, major surgery, burns, adult
 CC respiratory distress syndrome, transplantation, deep vein thrombosis,
 CC heparin-induced thrombocytopenia, sickle cell disease, thalassemia, viral
 CC hemorrhagic fever, thrombotic thrombocytopenic purpura, and hemolytic
 CC uremic syndrome, and also useful for treating thrombotic disorders and
 CC acute coronary syndromes such as myocardial infarction, unstable angina,
 CC and stroke. Protein C derivatives with amino acid substitutions result in
 CC increased resistance to inactivation by serpins when compared to wild-
 CC type activated human protein C. They also have longer half-lives in human
 CC blood and hence require either less frequent administration and/or
 CC smaller dosage than wild type human protein C for treating disorders

XX Sequence 419 AA;

XX Query Match 99.6%; Score 2314; DB 4; Length 419;
 XX Best Local Similarity 99.5%; Pred. No. 1.4e-142;
 XX Matches 417; Conservative 1; Mismatches 1; Indels 0; Gaps 0;

QY 1 ANSFLEIRHSLSRECEIEICDFEAKETFQNVDDTLAFMSKHVDGQCLVPLHPCA 60
 DB 1 ANSFLEIRHSLSRECEIEICDFEAKETFQNVDDTLAFMSKHVDGQCLVPLHPCA 60
 QY 61 SICCGHGTICIDGIGSFCDCRSQSGWGRFCQREVSFLNSGLDNGGCTHYCLEVGMRRSC 120
 DB 61 SICCGHGTICIDGIGSFCDCRSQSGWGRFCQREVSFLNSGLDNGGCTHYCLEVGMRRSC 120
 QY 121 AFGYKLGDDLLQCHPAVKPCGRPWKMEKKRSHLRKDTDEDDQVDPRLIDKMTRRGD 180
 DB 121 AFGYKLGDDLLQCHPAVKPCGRPWKMEKKRSHLRKDTDEDDQVDPRLIDKMTRRGD 180

QY 181 SPQVYVLLDSKKKLAGAVLHPSVWLTAAHCHDESKLLVRLGEYDLRRWEKWEJLDI 240
 XX
 DB 181 SPQVYVLLDSKKKLAGAVLHPSVWLTAAHCHDESKLLVRLGEYDLRRWEKWEJLDI 240
 QY 241 KEVFVHPYNSKSTTDNDIALHLAOPATLSQTVIPICLPDSGLARELNQAGETLVYGM 300
 DB 241 KEVFVHPYNSKSTTDNDIALHLAOPATLSQTVIPICLPDSGLARELNQAGETLVYGM 300
 QY 301 GHSSREKARNRNFTVLPNFKIPVPHNRCSEVMNSMTSEMLCAGILDRDACEGDS 360
 DB 301 GHSSREKARNRNFTVLPNFKIPVPHNRCSEVMNSMTSEMLCAGILDRDACEGDS 360
 QY 361 GGPVVASFHGTWFLVGLVSWGEGCLHNVGVYTKVSRYLDMHGHTRDKAPQKSNAP 419
 DB 361 GGPVVASFHGTWFLVGLVSWGEGCLHNVGVYTKVSRYLDMHGHTRDKAPQKSNAP 419

RESULT 65

AAN99005 standard, protein: 419 AA.

AAN99005;

23-AUG-2002 (first entry)

Human Protein C zymogen protein mutant D189N/K191S.

XX Human, Protein C; N-glycosylation; APC; activated protein C; zymogen;
 XX serum half-life; chromosome 2q13-q14; stroke; myocardial infarction;
 XX after venous thrombosis; disseminated intravascular coagulation; DIC;
 XX sepsis; septic shock; embolism; pulmonary embolism; burn; pregnancy;
 XX bone marrow transplantation; major surgery; trauma; AIDS; coagulant;
 XX adult respiratory distress syndrome; alpha-1 antitrypsin; mutant; mulein.
 OS Homo sapiens.
 OS Synthetic.

FH Key Location/Qualifiers

FT Protein 1..155

FT Peptide 156..157

FT Protein 158..419

FT Peptide 158..159

FT Misc-difference 189

FT Misc-difference 191

XX WC000232461-A2.

PD 25-APR-2002.

PF 15-OCT-2001; 2001WO-DK000679.

PR 18-OCT-2000; 2000DK-00001560.

PR 18-OCT-2000; 2000US-02422688.

PR 21-JUN-2001; 2001DK-00000970.

PR 21-JUN-2001; 2001US-0300154P.

XX (MAXY-) MAXYGEN APS.

XX (MAXY-) MAXYGEN HOLDINGS LTD.

XX Andersen KV, Pedersen AH, Friesgaard PO;

XX WPI; 2002-489875/52.

XX Novel conjugate useful for treating or preventing septic shock, stroke

XX and myocardial infarction, comprises non-polypeptide group covalently

XX attached to protein C polypeptide comprising an attachment group.

PS Claim 9; Page; 92pp; English.

XX The invention relates to a conjugate (I) comprising at least one non-
 CC polypeptide moiety (II) (e.g. an N-glycosyl group) covalently attached to
 CC a protein C polypeptide comprising an amino acid sequence which differs
 CC from that of a parent protein C polypeptide (III) in at least one
 CC introduced and/or at least one removed amino acid residue comprising an
 CC attachment group for the non-polypeptide group (e.g. an N-glycosylation
 CC site). Also included are (I) a variant (IV) of (III) comprising a
 CC substitution in a position (P) where (P) is an amino acid with at least
 CC 25% of its side group exposed to the surface, with the proviso that the
 CC substitution is not Thr245Ser/Ala/His/Lys/Arg/Asn/Asp/Glu/Gly/Gln/Thr/
 CC Tyr302Ser/Ala/Thr/His/Lys/Arg/Asn/Asp/Glu/Gly/Gln or Phe315Ser/Ala/Thr/
 CC His/Lys/Arg/Asn/Asp/Glu/Gly/Gln; (2) a nucleotide sequence (V) encoding
 CC (IV); (3) an expression vector (VI) comprising (V); (4) a host cell (VII)
 CC comprising (V) or (VI); (5) increasing (M2) the functional in vivo half-
 CC life or the serum half-life of a parent protein C polypeptide. The
 CC conjugates, variants and protein C proteins are useful as medicaments,
 CC and in the manufacture of medicaments for the treatment (and
 CC diagnosis/prevention) of stroke, myocardial infarction (MI), sepsis, septic
 CC thrombosis, disseminated intravascular coagulation (DIC), sepsis, septic
 CC shock, emboli e.g. pulmonary emboli, transplantation such as bone marrow
 CC transplantation, burns, pregnancy, major surgery/trauma or adult
 CC respiratory distress syndrome (ARDS). The variant protein C has an
 CC increased resistance to activation by e.g. human plasma and alpha-1
 CC antitrypsin. The conjugates have an increased in vivo half-life,
 CC increased serum half-life, increased resistance to inhibitors, reduced
 CC renal clearance, reduced immunogenicity and/or increased bioavailability.
 CC The conjugate offers a number of advantages over the currently available
 CC APC products, including longer duration between injections. Moreover, a
 CC administration of less protein, and fewer side effects. Moreover, a
 CC reduced anticoagulant activity is beneficial to reduce the risk of
 CC bleeding while maintaining the antiinflammatory activity of APC
 CC (activated protein C) conjugates. This must be especially important when
 CC the conjugate has an extended plasma life. The gene for protein C is
 CC located on chromosome 2q13-q14. The present sequence represents a zymogen
 CC protein C variant of the invention. Note: The present sequence is not
 CC shown in the specification but was created by the indexer using the
 CC protein C sequence appearing as AAN99002 and the information in claim 9

XX Sequence 419 AA:

Query Match 99.6%; Score 2314; DB 5; Length 419;
 Best Local Similarity 99.5%; Pred. No. 1.4e-142;
 Matches 417; Conservative 1; Mismatches 1; Indels 0; Gaps 0;

QY 1 ANSFLEELRHSSLERECIEICDPFEAKETFOVVDTLAFWSKIVDQCLVPLHPCA 60
 DB 1 ANSFLEELRHSSLERECIEICDPFEAKETFOVVDTLAFWSKIVDQCLVPLHPCA 60
 QY 61 SLCCGHGTCIDIGISFSCDCRSGWGRCFCQREVSFLNCSLDNGCTHYCLEYGVRRSC 120
 DB 61 SLCCGHGTCIDIGISFSCDCRSGWGRCFCQREVSFLNCSLDNGCTHYCLEYGVRRSC 120
 QY 121 ARGYKLGDLLQCHPAVYFCGRPMKMKRSHLRDHEODQVPRILDGKMYTRBGD 180
 DB 121 ARGYKLGDLLQCHPAVYFCGRPMKMKRSHLRDHEODQVPRILDGKMYTRBGD 180
 QY 181 SPQVYVLLDSKKKLAGAVLHPSVWLTAAHCHDESKLLVRLGEYDLRRWEKWEJLDI 240
 DB 181 SPQVYVLLDSKKKLAGAVLHPSVWLTAAHCHDESKLLVRLGEYDLRRWEKWEJLDI 240
 QY 241 KEVFVHPYNSKSTTDNDIALHLAOPATLSQTVIPICLPDSGLARELNQAGETLVYGM 300
 DB 241 KEVFVHPYNSKSTTDNDIALHLAOPATLSQTVIPICLPDSGLARELNQAGETLVYGM 300
 QY 301 GHSSREKARNRNFTVLPNFKIPVPHNRCSEVMNSMTSEMLCAGILDRDACEGDS 360
 DB 301 GHSSREKARNRNFTVLPNFKIPVPHNRCSEVMNSMTSEMLCAGILDRDACEGDS 360
 QY 361 GGPVVASFHGTWFLVGLVSWGEGCLHNVGVYTKVSRYLDMHGHTRDKAPQKSNAP 419
 DB 361 GGPVVASFHGTWFLVGLVSWGEGCLHNVGVYTKVSRYLDMHGHTRDKAPQKSNAP 419

Query	Match	99.6%	Score 2314	DB 5	Length 419
Best Local Similarity	99.5%	Pred. No. 1.4e-142			
Matches 417	Conservative 0	Mismatches 2	Indels 0	Gaps 0	
QY	1	ANSFLEELRHSLERECEIEICPEEBAKEIFONVDUTLAWSKHVDGQCIVLPLEHPCA	60		
DB	1	ANSFLEELRHSLERECEIEICPEEBAKEIFONVDUTLAWSKHVDGQCIVLPLEHPCA	60		
QY	61	SLCCGHCCTIDGIGSSCDRCSGMEGRFORVSTFLNCSLDNCGCHPLCLEAEVGRRCSC	120		
DB	61	SLCCGHCCTIDGIGSSCDRCSGMEGRFORVSTFLNCSLDNCGCHPLCLEAEVGRRCSC	120		
QY	121	APGYKLGDDLQCHPVPKPGCRPMKMEKKSHLRKDEDEQEDYDPRLLIDGKMTREGD	180		
DB	121	APGYKLGDDLQCHPVPKPGCRPMKMEKKSHLRKDEDEQEDYDPRLLIDGKMTREGD	180		
QY	181	SPQVYVLLDSKKKLAGAVLHPSPVLTAAHOMDSKKLVRLGEVDLRREKKELDLQI	240		
DB	181	SPQVYVLLDSKKKLAGAVLHPSPVLTAAHOMDSKKLVRLGEVDLRREKKELDLQI	240		
QY	241	KEVFNHENVKSTTDNDIALMLAQAPATLSQITVPICLPDSGLAERELNOAGQETLVTCM	300		
DB	241	KEVFNHENVKSTTDNDIALMLAQAPATLSQITVPICLPDSGLAERELNOAGQETLVTCM	300		
QY	301	GHSSEKEAKRNRTVTLNFIKIEVPEHNECSHWKSNVSENNLCAGLIGRQDACEGDS	360		
DB	301	GHSSEKEAKRNRTVTLNFIKIEVPEHNECSHWKSNVSENNLCAGLIGRQDACEGDS	360		
QY	361	GGPMVASFHGTWFLVYGNSEWEGGGLAHNGVYTVASVYLDWTHGHIRDEKAPQSWAP	419		
DB	361	GGPMVASFHGTWFLVYGNSEWEGGGLAHNGVYTVASVYLDWTHGHIRDEKAPQSWAP	419		

RESULT 67

AAU99039

AAU99039 standard; protein; 419 AA.

AAU99039;

23-AUG-2002 (first entry)

Human Protein C zymogen protein mutant T254N/N256S.

Human, Protein C, N-glycosylation, APC, activated protein C; zymogen; serum half-life; chromosome 2q13-q14; stroke; myocardial infarction; after venous thrombosis; disseminated intravascular coagulation; DIC;

KM sepsis; septic shock; embolism; pulmonary embolism; burn; pregnancy;
 KM bone marrow transplantation; major surgery; trauma; ARDS; coagulant;
 XX adult respiratory distress syndrome; alpha-1 antitrypsin; mutant; mutain.
 OS Homo sapiens.
 XX Synthetic.
 FT Key
 FT Location/Qualifiers
 FT 1..155
 FT /label= Light_chain
 FT Peptide
 FT 156..157
 FT /label= Lys_Arg_dipeptide
 FT Protein
 FT 158..419
 FT /label= Heavy_chain
 FT Peptide
 FT 158..169
 FT /label= Activation_peptide
 FT Misc-difference 254
 FT /note= "Wild-type Thr substituted by Asn"
 FT Misc-difference 256
 FT /note= "Wild-type Asn substituted by Ser"
 FT
 FT WC200223461-A2.
 XX
 XX 25-APR-2002.
 XX
 XX 15-OCT-2001; 2001WC-DK000679.
 XX
 XX 18-OCT-2000; 2000DK-00001560.
 XX 18-OCT-2000; 2000DS-0242268P.
 PR 21-JUN-2001; 2001DK-00000970.
 PR 21-JUN-2001; 2001US-0300154P.
 XX
 PA (MAXY-) MAXYGEN APS.
 PA (MAXY-) MAXYGEN HOLDINGS LTD.
 XX
 P1 Andersen KV, Pedersen AH, Freskgard PO;
 XX
 XX WPI; 2002-489875/52.
 DR
 XX
 PT Novel conjugate useful for treating or preventing septic shock, stroke
 PT and myocardial infarction, comprises non-polypeptide group covalently
 PT attached to protein C polypeptide comprising an attachment group.
 XX
 PS Claim 9; Page; 92P; English.
 XX
 CC The invention relates to a conjugate (I) comprising at least one non-
 CC polypeptide moiety (II) (e.g. an N-glycosyl group) covalently attached to
 CC a protein C polypeptide comprising an amino acid sequence which differs
 CC from that of a parent protein C polypeptide (III) in at least one
 CC introduced and/or at least one removed amino acid residue comprising an
 CC attachment group for the non-polypeptide group (e.g. an N-glycosylation
 CC site). Also included are (1) a variant (IV) of (III) comprising a
 CC substitution in a position (P) where (P) is an amino acid with at least
 CC 2% of its side group exposed to the surface, with the proviso that the
 CC substitution is not Thr245Ser/Ala/His/Lys/Arg/Asn/Asp/Glu/Gly/Gln,
 CC Tyr32Ser/Ala/Thr/His/Lys/Arg/Asn/Asp/Glu/Gly/Gln or Phe36Ser/Ala/Thr/
 CC His/Lys/Arg/Asn/Asp/Glu/Gly/Gln; (2) a nucleotide sequence (V) encoding
 CC (IV); (3) an expression vector (VI) comprising (V); (4) a host cell (VII)
 CC comprising (V) or (VI); (5) increasing (W2) the functional in vivo half-
 CC life or the serum half-life of a parent protein C polypeptide. The
 CC conjugates, variants and protein C proteins are useful as medicaments,
 CC and in the manufacture of medicaments for the treatment (and
 CC diagnosis/prevention) of stroke, myocardial infarction (DIC), sepsis, septic
 CC thrombosis, disseminated intravascular coagulation (DIC), sepsis, septic
 CC shock, emboli e.g. pulmonary emboli, transplantation such as bone marrow
 CC transplantation, burns, pregnancy, major surgery/trauma or adult
 CC respiratory distress syndrome (ARDS). The variant protein C has an
 CC increased resistance to activation by e.g. human plasma and alpha-1
 CC antitrypsin. The conjugates have an increased in vivo half-life,
 CC increased serum half-life, increased resistance to inhibitors, reduced
 CC renal clearance, reduced immunogenicity and/or increased bioavailability.
 CC The conjugate offers a number of advantages over the currently available
 CC APC products, including longer duration between injections.

CC administration of less protein, and fewer side effects. Moreover, a
 CC reduced anticoagulant activity is beneficial to reduce the risk of
 CC bleeding while maintaining the antiinflammatory activity of APC
 CC (activated protein C) conjugates. This must be especially important when
 CC the conjugate has an extended plasma life. The gene for protein C is
 CC located on chromosome 2q13-q14. The present sequence represents a zymogen
 CC protein C variant of the invention. Note: The present sequence is not
 CC shown in the specification but was created by the indexer using the
 CC protein C sequence appearing as AAU99002 and the information in claim 9
 XX
 XX SQ Sequence 419 AA;
 XX
 XX Query Match 99.6%; Score 2314; DB 5; Length 419;
 XX Best Local Similarity 99.5%; Pred. No. 1,4e-142;
 XX Matches 417; Conservative 1; Mismatches 1; Indels 0; Gaps 0;
 QY 1 ANSFLEIRHSLERECIEICDPEAKELFQNVDTLAFMSKVDQCLVPLEHPCA 60
 DB 1 ANSFLEIRHSLERECIEICDPEAKELFQNVDTLAFMSKVDQCLVPLEHPCA 60
 QY 61 SLCCGHGTCIDIGSSCDRCSSGWEGRFCQREYSFLNCSLNGGCTHYCLAEVGRRCSC 120
 DB 61 SLCCGHGTCIDIGSSCDRCSSGWEGRFCQREYSFLNCSLNGGCTHYCLAEVGRRCSC 120
 QY 121 APGYRLGDDLLQCHPVPKPCGRPWKMEKKRSHLKRDTEDQEDQVDPRLIDSKYTRRGD 180
 DB 121 APGYRLGDDLLQCHPVPKPCGRPWKMEKKRSHLKRDTEDQEDQVDPRLIDSKYTRRGD 180
 QY 181 SPWQVTLIDSKKCLACGAVLHPSWVLTAAHCDKESKLLVRLGEYDURMEWELLDI 240
 DB 181 SPWQVTLIDSKKCLACGAVLHPSWVLTAAHCDKESKLLVRLGEYDURMEWELLDI 240
 QY 241 KEVFPHPVSKSTINDIALHLAOPATLSQITVPCLPDSGLAEELNAGETLVYGM 300
 DB 241 KEVFPHPVSKSTINDIALHLAOPATLSQITVPCLPDSGLAEELNAGETLVYGM 300
 QY 301 GHSSREKEAKRNRVTLVNFIKIPVPHNECSVMSNMVSEMLCAGILDRDACEGDS 360
 DB 301 GHSSREKEAKRNRVTLVNFIKIPVPHNECSVMSNMVSEMLCAGILDRDACEGDS 360
 QY 361 GGPWVASFHGTWFLVGVSWGEGCGLLHNYGYTTKYSRLTWIGHIRDEAKQKSNAP 419
 DB 361 GGPWVASFHGTWFLVGVSWGEGCGLLHNYGYTTKYSRLTWIGHIRDEAKQKSNAP 419
 XX
 XX RESULT 68
 XX AAU99076
 XX ID AAU99076 standard; protein; 419 AA.
 XX
 XX AAU99076;
 XX
 XX 23-AUG-2002 (first entry)
 XX
 XX Human Protein C zymogen protein mutant M338N/S340T.
 XX
 XX Human; Protein C; N-glycosylation; APC; activated protein C; zymogen;
 XX serum half-life; chromosome 2q13-q14; stroke; myocardial infarction;
 XX after venous thrombosis; disseminated intravascular coagulation; DIC;
 XX sepsis; septic shock; embolism; pulmonary embolism; burn; pregnancy;
 XX bone marrow transplantation; major surgery; trauma; ARDS; coagulant;
 XX adult respiratory distress syndrome; alpha-1 antitrypsin; mutant; mutain.
 XX
 OS Homo sapiens.
 OS Synthetic.
 XX
 XX Key
 XX Location/Qualifiers
 XX FH Protein
 XX 1..155
 XX /label= Light_chain
 XX Peptide
 XX 156..157
 XX /label= Lys_Arg_dipeptide
 XX Protein
 XX 158..419
 XX /label= Heavy_chain
 XX Peptide
 XX 158..169
 XX /label= Heavy_chain

FT /label= Activation_peptide
 FT Misc-difference 338
 FT /note= "Wild-type Met substituted by Asn"
 FT Misc-difference 340
 FT /note= "Wild-type Ser substituted by Thr"
 PN WC200232461-A2.
 PD 25-APR-2002.
 XX
 PF 15-OCT-2001; 2001MO-DK000679.
 XX
 PR 18-OCT-2000; 2000DK-00001560.
 PR 18-OCT-2000; 2000US-0242268P.
 PR 21-JUN-2001; 2001DK-00000970.
 PR 21-JUN-2001; 2001US-0300154P.
 XX
 PA [MAXY-] MAXYGEN APS.
 PA [MAXY-] MAXYGEN HOLDINGS LTD.
 PI Andersen KV, Pedersen AH, Freaekgaard PO;
 XX WPI; 2002-489875/52.
 DR
 PT Novel conjugate useful for treating or preventing septic shock, stroke
 PT and myocardial infarction, comprises non-polypeptide group covalently
 PT attached to protein C polypeptide comprising an attachment group.
 XX
 PS Claim 9; Page; 92pp; English.
 XX
 CC The invention relates to a conjugate (I) comprising at least one non-
 CC polypeptide moiety (II) (e.g. an N-glycosyl group) covalently attached to
 CC a protein C polypeptide comprising an amino acid sequence which differs
 CC from that of a parent protein C polypeptide (III) in at least one
 CC introduced and/or at least one removed amino acid residue comprising an
 CC attachment group for the non-polypeptide group (e.g. an N-glycosylation
 CC site). Also included are (1) a variant (IV) of (III) comprising a
 CC substitution in a position (p) where (p) is an amino acid with at least
 CC 25% of its side group exposed to the surface, with the proviso that the
 CC substitution is not Thr34Ser/Ala/His/Lys/Arg/Asn/Asp/Glu/Gly/Gln,
 CC Tyr302Ser/Ala/Thr/His/Lys/Arg/Asn/Asp/Glu/Gly/Gln or Phe35Ser/Ala/Thr/
 CC His/Lys/Arg/Asn/Asp/Glu/Gly/Gln; (2) a nucleotide sequence (V) encoding
 CC (IV); (3) an expression vector (VI) comprising (V); (4) a host cell (VII)
 CC comprising (V) or (VI); (5) increasing (M2) the functional in vivo half-
 CC life or the serum half-life of a parent protein C polypeptide. The
 CC conjugates, variants and protein C proteins are useful as medicaments,
 CC and in the manufacture of medicaments for the treatment (and
 CC diagnosis/prevention) of stroke, myocardial infarction, after venous
 CC thrombosis, disseminated intravascular coagulation (DIC), sepsis, septic
 CC shock, emboli e.g. pulmonary emboli, transplantation such as bone marrow
 CC transplantation, burns, pregnancy, major surgery/trauma or adult
 CC respiratory distress syndrome (ARDS). The variant protein C has an
 CC increased resistance to activation by e.g. human plasma and alpha-1
 CC antitrypsin. The conjugates have an increased in vivo half-life,
 CC increased serum half-life, increased resistance to inhibitors, reduced
 CC renal clearance, reduced immunogenicity and/or increased bioavailability.
 CC The conjugate offers a number of advantages over the currently available
 CC APC products, including longer duration over the currently available
 CC administration of less protein, and fewer side effects. Moreover, a
 CC reduced anticoagulant activity is beneficial to reduce the risk of
 CC bleeding while maintaining the antiinflammatory activity of APC
 CC (activated protein C) conjugates. This must be especially important when
 CC the conjugate has an extended plasma life. The gene for protein C is
 CC located on chromosome 2q13-q14. The present sequence represents a zymogen
 CC protein C variant of the invention. Note: The present sequence is not
 CC shown in the specification but was created by the indexer using the
 CC protein C sequence appearing as AAU99002 and the information in claim 9
 XX
 SQ Sequence 419 AA;
 Query Match 99.6%; Score 2314; DB 5; Length 419;
 Best Local Similarity 99.5%; Pred. No. 1.4e-142;
 Matches 417; Conservative 1; Mismatches 1; Indels 0; Gaps 0;

QY 1 ANSLFLEHRSLSRECEETEEICOREBAKEIFONVDDTLAFNSHNDQCVLPLRHPCA 60
 DB 1 ANSLFLEHRSLSRECEETEEICOREBAKEIFONVDDTLAFNSHNDQCVLPLRHPCA 60
 QY 61 SLCCGSGTCTDGTGSGFSCDCRSWEGRFGQREVSFLNCSLDNCGCTHYCTLEVGMRCSG 120
 DB 61 SLCCGSGTCTDGTGSGFSCDCRSWEGRFGQREVSFLNCSLDNCGCTHYCTLEVGMRCSG 120
 QY 121 APGYKLGDDLLQCHPAVFPCCGRPWKMEKRSKSLKQDTEQDQDVPRLIDGKMTREGD 180
 DB 121 APGYKLGDDLLQCHPAVFPCCGRPWKMEKRSKSLKQDTEQDQDVPRLIDGKMTREGD 180
 QY 181 SPWQVVLDSKKLLACGAVLHPSWLTAAHOMPSKKLLVRLGEVDLRRWKEHLDLT 240
 DB 181 SPWQVVLDSKKLLACGAVLHPSWLTAAHOMPSKKLLVRLGEVDLRRWKEHLDLT 240
 QY 241 KEVFHNYSKSTTNDIALHLAOPATLSQTVIPICLPDSGLARELNQAGQETLVYTW 300
 DB 241 KEVFHNYSKSTTNDIALHLAOPATLSQTVIPICLPDSGLARELNQAGQETLVYTW 300
 QY 301 GHSSREKREKRRKRTFVNLFTKIPVPHNECSEVMSNNVSENNLCAGLIGDRDACEGDS 360
 DB 301 GHSSREKREKRRKRTFVNLFTKIPVPHNECSEVMSNNVSENNLCAGLIGDRDACEGDS 360
 QY 361 GSPWVASFHGTNFIWGLVSWGEGGLAHYGYTWKSVRYLDWHGHTIRPKAPQKSNAP 419
 DB 361 GSPWVASFHGTNFIWGLVSWGEGGLAHYGYTWKSVRYLDWHGHTIRPKAPQKSNAP 419
 RESULT 69
 AAU99097
 ID AAU99097 standard; protein; 419 AA.
 AC AAU99097;
 XX
 DT 23-AUG-2002 (first entry)
 XX
 DE Human Protein C zymogen protein mutant D189N/X191N.
 XX
 KM Human; Protein C; N-glycosylation; APC; activated protein C; zymogen;
 KM serum half-life; chromosome 2q13-q14; stroke; myocardial infarction;
 KM after venous thrombosis; disseminated intravascular coagulation; DIC;
 KM sepsis; septic shock; embolism; pulmonary embolism; burns; pregnancy;
 KM bone marrow transplantation; major surgery; trauma; ARDS; coagulant;
 KM adult respiratory distress syndrome; alpha-1 antitrypsin; mutant; mutein.
 XX
 OS Homo sapiens.
 OS Synthetic.
 XX
 PH Key Location/Qualifiers
 FT 1..155
 FT Protein /label= Light_chain
 FT Peptide /label= Lys_Arg_dipeptide
 FT Protein /label= Lys_Arg_dipeptide
 FT Peptide /label= Heavy_chain
 FT Peptide /label= Heavy_chain
 FT Peptide /label= Heavy_chain
 FT Misc-difference 189
 FT /note= "Wild-type Asp substituted by Asn"
 FT Misc-difference 191
 FT /note= "Wild-type Lys substituted by Asn"
 PN WC200232461-A2.
 PD 25-APR-2002.
 XX
 PF 15-OCT-2001; 2001MO-DK000679.
 XX
 PR 18-OCT-2000; 2000DK-00001560.
 PR 18-OCT-2000; 2000US-0242268P.
 PR 21-JUN-2001; 2001DK-00000970.

21-JUN-2001; 2001US-0300154P.
 (MAXY-) MAXYGEN APS.
 (MAXY-) MAXYGEN HOLDINGS LTD.
 Andersen KV, Pedersen AH, Freskgaard PO,
 WPI; 2002-489875/52.
 Novel conjugate useful for treating or preventing septic shock, stroke and myocardial infarction, comprises non-polypeptide group covalently attached to protein C polypeptide comprising an attachment group.
 Example 5; Page; 92pp; English.

The invention relates to a conjugate (I) comprising at least one non-polypeptide moiety (II) (e.g. an N-glycosyl group) covalently attached to a protein C polypeptide comprising an amino acid sequence which differs from that of a parent protein C polypeptide (III) in at least one introduced and/or at least one removed amino acid residue comprising an attachment group for the non-polypeptide group (e.g. an N-glycosylation site). Also included are (i) a variant (IV) of (III) comprising a substitution in a position (P) where (P) is an amino acid with at least 25% of its side group exposed to the surface, with the proviso that the substitution is not Thr245Ser/Ala/His/Lys/Arg/Asn/Asp/Glu/Gly/Gln, Tyr302Ser/Ala/Thr/His/Lys/Arg/Asn/Asp/Glu/Gly/Gln, His/Lys/Arg/Asn/Asp/Glu/Gly/Gln; (2) a nucleotide sequence (V) encoding (IV); (3) an expression vector (VI) comprising (V); (4) a host cell (VII) comprising (V) or (VI); (5) increasing (X2) the functional in vivo half-life or the serum half-life of a parent protein C polypeptide. The conjugates, variants and protein C proteins are useful as medicaments, and in the manufacture of medicaments for the treatment (and diagnosis/prevention) of stroke, myocardial infarction, after venous thrombosis, disseminated intravascular coagulation (DIC), sepsis, septic shock, emboli e.g. pulmonary emboli, transplantation such as bone marrow transplantation, burns, pregnancy, major surgery/trauma or adult respiratory distress syndrome (ARDS). The variant protein C has an increased resistance to activation by e.g. human plasma and alpha-1 antitrypsin. The conjugates have an increased in vivo half-life, increased serum half-life, increased resistance to inhibitors, reduced renal clearance, reduced immunogenicity and/or increased bioavailability. The conjugate offers a number of advantages over the currently available APC products, including longer duration between injections, administration of less protein, and fewer side effects. Moreover, a reduced anticoagulant activity is beneficial to reduce the risk of bleeding while maintaining the antiinflammatory activity of APC (activated protein C) conjugates. This must be especially important when the conjugate has an extended plasma life. The gene for protein C is located on chromosome 2q13-q14. The present sequence represents a zymogen protein C variant of the invention. Note: The present sequence is not shown in the specification but was created by the indexer using the protein C sequence appearing as A4939002 and the information in claim 9

Sequence 419 AA:

Query Match 99.6%; Score 2314; DB 5; Length 419;
 Best Local Similarity 99.5%; Pred. No. 1,4e-142;
 Matches 417; Conservative 1; Mismatches 1; Indels 0; Gaps 0;

QY 1 ANSFLERLRSSLERECIEECPEBAKEIPQVNDLTAFMSRVNQGQCLVLEPRCA 60
 DB 1 ANSFLERLRSSLERECIEECPEBAKEIPQVNDLTAFMSRVNQGQCLVLEPRCA 60
 QY 61 SLCCGSGTCTIDGSGFSCDCRSWGEGSPQCRVSYSLNCSLDNGGCTHYCLEEVGMRCSQ 120
 DB 61 SLCCGSGTCTIDGSGFSCDCRSWGEGSPQCRVSYSLNCSLDNGGCTHYCLEEVGMRCSQ 120
 QY 121 APGYKGGDILQGHAVKFCGRPKRMEKKSHTKPTEDQEDQYDPLIDGQKTRGG 180
 DB 121 APGYKGGDILQGHAVKFCGRPKRMEKKSHTKPTEDQEDQYDPLIDGQKTRGG 180
 QY 181 SPQVVLNLSKKLACGAVLTHPSWVLTAAHGMDSKKLVLRGCEVDLRMEKVELLDI 240

DB 181 SPQVVLNLSKKLACGAVLTHPSWVLTAAHGMDSKKLVLRGCEVDLRMEKVELLDI 240
 QY 241 KEVFPHPVSKSTTNDIDALLHQAQPTLSQTVPLCLPDSGLABERLNAQGETLVYGM 300
 DB 241 KEVFPHPVSKSTTNDIDALLHQAQPTLSQTVPLCLPDSGLABERLNAQGETLVYGM 300
 QY 301 GHSSREKARNRRTVLFNFIKIPVPHNCSRWMSNNVSENNLCAGIIGDRDADCEGS 360
 DB 301 GHSSREKARNRRTVLFNFIKIPVPHNCSRWMSNNVSENNLCAGIIGDRDADCEGS 360
 QY 361 GGPVYASFGTWFLVGVISWEGCGLLHNYGYTKVSRYLDMTHGH:RDXEAPQKSMAP 419
 DB 361 GGPVYASFGTWFLVGVISWEGCGLLHNYGYTKVSRYLDMTHGH:RDXEAPQKSMAP 419
 RESULT 70
 AAU99009
 ID AAU99009 standard; protein; 419 AA.
 AC AAU99009,
 DT 23-AUG-2002 (first entry)
 XX Human Protein C zymogen protein mutant K191N/K193S.
 XX Human; Protein C; N-glycosylation; APC; activated protein C; zymogen;
 KM serum half-life; chromosome 2q13-q14; stroke; myocardial infarction;
 KM after venous thrombosis; disseminated intravascular coagulation; DIC;
 KM sepsis; septic shock; embolism; pulmonary embolism; burn; pregnancy;
 KM bone marrow transplantation; major surgery; trauma; ARDS; coagulant;
 KM adult respiratory distress syndrome; alpha-1 antitrypsin; mutant; mutein.
 XX Homo sapiens.
 OS Synthetic.
 OS
 FH Key Location/Qualifiers
 FT Protein 1..155
 FT /label= Light_chain
 FT Peptide 156..157
 FT /label= Lys_Arg_dipeptide
 FT Protein 158..419
 FT /label= Heavy_chain
 FT Peptide 158..169
 FT /label= Activation_peptide
 FT Misc-difference 191
 FT /note= "Wild-type Lys substituted by Asn"
 FT Misc-difference 193
 FT /note= "Wild-type Lys substituted by Ser"
 PN W0200232461-A2.
 PD 25-Apr-2002.
 XX 15-OCT-2001; 2001WO-DK000679.
 XX 18-OCT-2000; 2000DK-00001560.
 PR 18-OCT-2000; 2000US-024268P.
 PR 21-JUN-2001; 2001DK-00000970.
 PR 21-JUN-2001; 2001US-0300154P.
 XX (MAXY-) MAXYGEN APS.
 PA (MAXY-) MAXYGEN HOLDINGS LTD.
 PI Andersen KV, Pedersen AH, Freskgaard PO,
 DR WPI; 2002-489875/52.
 XX Novel conjugate useful for treating or preventing septic shock, stroke
 PT and myocardial infarction, comprises non-polypeptide group covalently
 PT attached to protein C polypeptide comprising an attachment group.
 XX Claim 9; Page; 92pp; English.

CC conjugates, variants and protein C proteins are useful as medicaments,
CC and in the manufacture of medicaments for the treatment (and
CC diagnosis/prevention) of stroke, myocardial infarction, after venous
CC thrombosis, disseminated intravascular coagulation (DIC), sepsis, septic
CC shock, emboli e.g. pulmonary emboli, transplantation such as bone marrow
CC transplantation, burns, pregnancy, major surgery/trauma or adult
CC respiratory distress syndrome (ARDS). The variant protein C has an
CC increased resistance to activation by e.g. human plasma and alpha-1
CC antitrypsin. The conjugates have an increased *in vivo* half-life,
CC increased serum half-life, increased resistance to inhibitors, reduced
CC renal clearance, reduced immunogenicity and/or increased bioavailability.
CC The conjugate offers a number of advantages over the currently available
CC APC products, including longer duration between injections,
CC administration of less protein, and fewer side effects. Moreover, a
CC reduced anticoagulant activity is beneficial to reduce the risk of
CC bleeding while maintaining the antiinflammatory activity of APC
CC (activated protein C) conjugates. This must be especially important when
CC the conjugate has an extended plasma life. The gene for protein C is
CC located on chromosome 2q13-q14. The present sequence represents a zymogen
CC protein C variant of the invention. Note: The present sequence is not
CC shown in the specification but was created by the indexer using the
CC protein C sequence appearing as AAU95002 and the information in claim 9
CC
CC Sequence 419 AA,
CC

SQ Sequence 419 AA;

Query Match	99.6%	Score 2314	DB 5	Length 419
Best Local Similarity	99.5%	Pred. No. 1.4e-142		
Matches 417; Conservative	0	Mismatches 2	Indels 0	Gaps 0

Qy	1	ANSLERHSSLEECIEBEI	CFPEAEI	IFONDDTL	AFMSKRVDBQCL	VLEI	AEPCA	60
Db	1	ANSLERHSSLEECIEBEI	CFPEAEI	IFONDDTL	AFMSKRVDBQCL	VLEI	AEPCA	60
Qy	61	SLCCGAGTODIDI	GSFCS	DGRSGMEGRF	CQREVSF	ANCSLJNGGCTHY	CLAEVGRRC	120
Db	61	SLCCGAGTODIDI	GSFCS	DGRSGMEGRF	CQREVSF	ANCSLJNGGCTHY	CLAEVGRRC	120
Qy	121	APGYKIGDILLQCHP	AVKPE	PCGRPMKRM	EKKRSHL	ARDTEDEQDV	PRLDGANTRGD	180
Db	121	APGYKIGDILLQCHP	AVKPE	PCGRPMKRM	EKKRSHL	ARDTEDEQDV	PRLDGANTRGD	180
Qy	181	SPWOVVLDSKKKLA	CGAVL	IHRSWL	LAACHDESKL	VRLGENT	LRMRKEML	240
Db	181	SPWOVVLDSKKKLA	CGAVL	IHRSWL	LAACHDESKL	VRLGENT	LRMRKEML	240
Qy	241	KEVFPVPHNYSKST	DDNAL	HLH	AOPATLSOTI	PICLPDSGLAERL	NOAGCEFLV	300
Db	241	KEVFPVPHNYSKST	DDNAL	HLH	AOPATLSOTI	PICLPDSGLAERL	NOAGCEFLV	300
Qy	301	GTHSSREKAKRNT	PVLAF	IKI	PVP	PHNECSEVMS	NVSEML	360
Db	301	GTHSSREKAKRNT	PVLAF	IKI	PVP	PHNECSEVMS	NVSEML	360
Qy	361	GGPVVAVSHFGT	VLVGV	SMGBCG	LHNVY	TTKYSRL	MLHGH	415
Db	361	GGPVVAVSHFGT	VLVGV	SMGBCG	LHNVY	TTKYSRL	MLHGH	415

RESULT 72
AAU99070

ID AU99070 standard; protein; 419 AA

AC AAU99070;

DT 23-AUG-2002 (first entry)

Human Protein C zymogen protein mutant V334N/S336T

KM Human; Protein C; N-glycosylation; APC; activated protein C; zymogen;
KM serum half-life; chromosome 2q13-q14; stroke; myocardial infarction;
KM alter venous thrombosis; disseminated intravascular coagulation; DIC;
KM sepsis; septic shock; embolism; pulmonary embolism; burn; pregnancy;
KM bone marrow transplantation; major surgery; trauma; ARDS; coagulant;

KW	adult respiratory distress syndrome; alpha-1 antitrypsin; mutant; mutein
XX	
XX	
OS	Homo sapiens.
OS	Synthetic.
XX	
EH	Key
FT	Protein
FT	1. .155
FT	/label= light_chain
FT	156. .157
FT	/label= Lys_Arg_dipeptide
FT	158. .419
FT	/label= Heavy_chain
FT	158. .169
FT	/label= Activation_peptide
FT	334
FT	/note= "wild-type Val substituted by Asn"
FT	336
FT	/note= "wild-type Ser substituted by Thr"
FT	

WO200232461-A2.

25-APR-2002

15-OCT-2001; 2001WO-DK000679

18-OCT-2000; 2000DK-00001560

21-JUN-2001; 2001DK-000000970

(MAY 1 1964)

(MAXY-) MAXYGEN HOLDINGS LTD

Andersen KV, Pedersen AH, 1

WPI; 2002-489875/52.

Novel conjugate useful for the

attached to protein C polypep

Claim 9; Page; 92pp; English

The invention relates to a circuit for controlling a motor.

The invention relates to a conjugate (I) comprising at least one non-polypeptide moiety (I1) (e.g. an N-glycosyl group) covalently attached to a protein C polypeptide comprising an amino acid sequence which differs from that of a parent protein C polypeptide (III) in at least one introduced and/or at least one removed amino acid residue comprising an attachment group for the non-polypeptide group (e.g. an N-glycosylation site). Also included are (1) a variant (IV) of (III) comprising a substitution in a position (P) where (P) is an amino acid with at least 25% of its side group exposed to the surface, with the proviso that the substitution is not Thr245Ser/Ala18His/Lys/Arg/Asn/Asp/Glu/Gly/Gln, Tyr302Ser/Ala18Thr/His/Lys/Arg/Asn/Asp/Glu/Gly/Gln or Phe315Ser/Ala18Thr/His/Lys/Arg/Asn/Asp/Glu/Gly/Gln, (2) a nucleotide sequence (V) encoding (IV), (3) an expression vector (VI) comprising (V), (4) a host cell (VII) comprising (V) or (VI), (5) increasing (M2) the functional in vivo half-life or the serum half-life of a parent protein C polypeptide. The conjugates, variants and protein C proteins are useful as medicaments, and in the manufacture of medicaments for the treatment (and diagnosis/prevention) of stroke, myocardial infarction, after venous thrombosis, disseminated intravascular coagulation (DIC), sepsis, septic shock, emboli e.g. pulmonary emboli, transplantation such as bone marrow transplantation, burns, pregnancy, major surgery/trauma or adult respiratory distress syndrome (ARDS). The variant protein C has an increased resistance to activation by e.g. human plasma and alpha-1 antitrypsin. The conjugates have an increased in vivo half-life, increased serum half-life, increased resistance to inhibitors, reduced renal clearance, reduced immunogenicity and/or increased bioavailability. The conjugate offers a number of advantages over the currently available APC products, including longer duration between injections, administration of less protein, and fewer side effects. Moreover, a reduced anticoagulant activity is beneficial to reduce the risk of

CC bleeding while maintaining the antiinflammatory activity of APC
 CC (activated protein C) conjugates. This must be especially important when
 CC the conjugate has an extended plasma life. The gene for protein C is
 CC located on chromosome 2q13-q14. The present sequence represents a zymogen
 CC protein C variant of the invention. Note: The present sequence is not
 CC shown in the specification but was created by the indexer using the
 CC protein C sequence appearing as AAU99002 and the information in claim 9
 XX
 SQ Sequence 419 AA;

Query Match 99.6%; Score 2314; DB 5; Length 419;
 Best Local Similarity 99.5%; Pred. No. 1,4e-142;
 Matches 417; Conservative 1; Mismatches 1; Indels 0; Gaps 0;

QY 1 ANSFLELRHSSLRRCICRIPCPEAKEIKQVNDTLAFMSKHYDQCLVPLEHPCA 60
 Db 1 ANSFLELRHSSLRRCICRIPCPEAKEIKQVNDTLAFMSKHYDQCLVPLEHPCA 60
 QY 61 SLCCGHGTCIDIGISFSCDGRSGMGGRFCQREVSFLNCSLDNGGCTHYCLEEYGRRCSC 120
 Db 61 SLCCGHGTCIDIGISFSCDGRSGMGGRFCQREVSFLNCSLDNGGCTHYCLEEYGRRCSC 120
 QY 121 APGYKLGDDLLQCHPAKPCGPRPKMEKKKSHLRKDEQEQVDPRLIDGKTRRGD 180
 Db 121 APGYKLGDDLLQCHPAKPCGPRPKMEKKKSHLRKDEQEQVDPRLIDGKTRRGD 180
 QY 181 SPQVVLDSKCKLACGAVLIHPSWVLTAAHCDMSKTLVRLSEYLRSEWEKWEIDDI 240
 Db 181 SPQVVLDSKCKLACGAVLIHPSWVLTAAHCDMSKTLVRLSEYLRSEWEKWEIDDI 240
 QY 241 KEVFNHRYVSKSTDDNDIALHLADPATLSQITVPCLPDSGLARELINAQGETLVTVGM 300
 Db 241 KEVFNHRYVSKSTDDNDIALHLADPATLSQITVPCLPDSGLARELINAQGETLVTVGM 300
 QY 301 GHSSREKAEKRNRTFVLPNFKIPVPHNEBSWMSNMNCAGLIEDRQDACEGDS 360
 Db 301 GHSSREKAEKRNRTFVLPNFKIPVPHNEBSWMSNMNCAGLIEDRQDACEGDS 360
 QY 361 GCEMVASFHGTWFLVGLVSGEGCGLLHNGVYTKYSRLYLWIGHGIRIDKEAPQKSNAP 419
 Db 361 GCEMVASFHGTWFLVGLVSGEGCGLLHNGVYTKYSRLYLWIGHGIRIDKEAPQKSNAP 419
 Db 361 GCEMVASFHGTWFLVGLVSGEGCGLLHNGVYTKYSRLYLWIGHGIRIDKEAPQKSNAP 419
 RESULT 73
 AAU99081
 ID AAU99081 standard; protein; 419 AA.
 XX
 AC AAU99081;
 XX
 DT 23-AUG-2002 (first entry)
 XX
 DE Human Protein C zymogen protein mutant D351N/Q353S.
 XX
 KW Human; Protein C; N-glycosylation; APC; activated protein C; zymogen;
 KW serum half-life; chromosome 2q13-q14; stroke; myocardial infarction;
 KW after venous thrombosis; disseminated intravascular coagulation; DIC;
 KW sepsis; septic shock; embolism; pulmonary embolism; burn; pregnancy;
 KW bone marrow transplantation; major surgery; trauma; ARDS; coagulant;
 KW adult respiratory distress syndrome; alpha-1 antitrypsin; mutant; mutant.
 XX
 OS Homo sapiens.
 OS Synthetic.
 XX
 FH Key Location/Qualifiers
 FT Protein 1..155
 FT Peptide /label= light_chain
 FT Peptide 156..157
 FT Protein /label= Lys_Arg_dipeptide
 FT Peptide 158..419
 FT Peptide /label= Heavy_chain
 FT Peptide 158..169
 FT Misc-difference 351
 FT /label= Activation_peptide

FT FT /note= "Wild-type Asp substituted by Asn"
 FT Misc-difference 353
 FT /note= "Wild-type Gln substituted by Ser"
 XX
 XX WO200232461-A2.
 XX
 XX 25-APR-2002.
 XX
 XX 15-OCT-2001; 2001WO-DK000679.
 XX
 XX 18-OCT-2000; 2000DK-00001560.
 XX 18-OCT-2000; 2000US-0242268P.
 XX 21-JUN-2001; 2001DK-00000970.
 XX 21-JUN-2001; 2001US-0300154P.
 XX (MAXY-) MAXYGEN APS.
 XX (MAXY-) MAXYGEN HOLDINGS LTD.
 XX
 XX Andersen KV, Pedersen AH, Freekgaard PO;
 XX WPI; 2002-469875/52.
 XX
 XX Claim 9; Page; 92pp; English.
 XX
 CC The invention relates to a conjugate (I) comprising at least one non-
 CC polypeptide moiety (II) (e.g. an N-glycosyl group) covalently attached to
 CC a protein C polypeptide comprising an amino acid sequence which differs
 CC from that of a parent protein C polypeptide (III) in at least one
 CC introduced and/or at least one removed amino acid residue comprising an
 CC attachment group for the non-polypeptide group (e.g. an N-glycosylation
 CC site). Also included are (I) a variant (IV) of (III) comprising a
 CC substitution in a position (P) where (P) is an amino acid with at least
 CC 25% of its side group exposed to the surface, with the proviso that the
 CC substitution is not Thr245Ser/Ala/His/Lys/Arg/Asn/Asp/Glu/Gly/Ala/Thr/
 CC Tyr102Ser/Ala/Thr/His/Lys/Arg/Asn/Asp/Glu/Gly/Ala/Thr/
 CC His/Lys/Arg/Asn/Asp/Glu/Gly/Ala/His/Lys/Arg/Asn/Asp/Glu/Gly/Ala/Thr/
 CC (IV); (3) an expression vector (VI) comprising (V); (4) a host cell (VII)
 CC comprising (V) or (VI); (5) increasing (M2) the functional in vivo half-
 CC life of the serum half-life of a parent protein C polypeptide. The
 CC conjugates, variants and protein C proteins are useful as medicaments,
 CC and in the manufacture of medicaments for the treatment (and
 CC diagnosis/prevention) of stroke, myocardial infarction, after venous
 CC thrombosis, disseminated intravascular coagulation (DIC), sepsis, septic
 CC shock, emboli e.g. pulmonary emboli, transplantation such as bone marrow
 CC transplantation, burns, pregnancy, major surgery/trauma or adult
 CC respiratory distress syndrome (ARDS). The variant protein C has an
 CC increased resistance to activation by e.g. human plasma and alpha-1
 CC antitrypsin. The conjugates have an increased in vivo half-life,
 CC increased serum half-life, increased resistance to inhibitors, reduced
 CC renal clearance, reduced immunogenicity and/or increased bioavailability.
 CC The conjugate offers a number of advantages over the currently available
 CC APC products, including longer duration of action, fewer side effects,
 CC administration of less protein, and fewer side effects. Moreover, a
 CC reduced anticoagulant activity is beneficial to reduce the risk of
 CC bleeding while maintaining the antiinflammatory activity of APC
 CC (activated protein C) conjugates. This must be especially important when
 CC the conjugate has an extended plasma life. The gene for protein C is
 CC located on chromosome 2q13-q14. The present sequence represents a zymogen
 CC protein C variant of the invention. Note: The present sequence is not
 CC shown in the specification but was created by the indexer using the
 CC protein C sequence appearing as AAU99002 and the information in claim 9
 XX
 XX SQ Sequence 419 AA;
 XX
 Query Match 99.6%; Score 2314; DB 5; Length 419;
 Best Local Similarity 99.5%; Pred. No. 1,4e-142;
 Matches 417; Conservative 1; Mismatches 1; Indels 0; Gaps 0;
 QY 1 ANSFLELRHSSLRRCICRIPCPEAKEIKQVNDTLAFMSKHYDQCLVPLEHPCA 60

QY 241 KEVFEHPNYSKSTNDNDIALHLAQPATLSQTIPICLPDSGLAREHINQAGETLVYGM 300
DB 241 KEVFEHPNYSKSTNDNDIALHLAQPATLSQTIPICLPDSGLAREHINQAGETLVYGM 300
QY 301 GYHSSEKAKAKNRFTVLFNFIKIPVPHNECEWMSNMVSENNLCAGILGRDADCEGDS 360
DB 301 GYHSSEKAKAKNRFTVLFNFIKIPVPHNECEWMSNMVSENNLCAGILGRDADCEGDS 360
QY 361 GGPWVASFGITWFLVGLVSWGEGCGILHNYGYTKYSRYLDMWIGHIRDKAPQKSWAP 419
DB 361 GGPWVASFGITWFLVGLVSWGEGCGILHNYGYTKYSRYLDMWIGHIRDKAPQKSWAP 419
RESULT 75
AAU99017
ID AAU99017 standard; protein; 419 AA.
XX
AC AAU99017;
XX
DT 23-AUG-2002 (first entry)
XX
DE Human Protein C zymogen protein mutant E215N/K217S.
XX
KM Human; Protein C; N-glycosylation; APC; activated protein C; zymogen;
KM serum half-life; chromosome 2q13-q14; stroke; myocardial infarction;
KM after venous thrombosis; disseminated intravascular coagulation; DIC;
KM sepsis; septic shock; embolism; pulmonary embolism; burn; pregnancy;
KM bone marrow transplantation; major surgery; trauma; ARDS; coagulancy;
KM adult respiratory distress syndrome; alpha-1 antitrypsin; mutant; mutein.
XX
OS Homo sapiens.
XX
OS Synthetic.
XX
FH Key
FH Protein Location/Qualifiers
FT 1..155
FT /label= Light_chain
FT Peptide
FT 156..157
FT /label= Lys_Arg_dipeptide
FT Protein
FT 158..419
FT /label= Heavy_chain
FT Peptide
FT 158..169
FT /label= Activation_peptide
FT Misc-difference 215
FT /note= "Wild-type Glu substituted by Asn"
FT Misc-difference 217
FT /note= "Wild-type Lys substituted by Ser"
XX
PN W0200232461-A2.
XX
PD 25-Apr-2002.
XX
PF 15-OCT-2001; 2001WO-DK000679.
XX
PR 18-OCT-2000; 2000DK-00001560.
PR 18-OCT-2000; 2000US-024268P.
PR 21-JUN-2001; 2001DK-00000970.
PR 21-JUN-2001; 2001US-0300154P.
XX
PA (MAXY-) MAXYGEN APS.
PA (MAXY-) MAXYGEN HOLDINGS LTD.
XX
PI Andersen KV, Federsen AH, Freekgaard PO;
XX
DR WPI; 2002-489875/52.
XX
PT Novel conjugate useful for treating or preventing septic shock, stroke
PT and myocardial infarction, comprises non-polypeptide group covalently
PT attached to protein C polypeptide comprising an attachment group.
XX
ES Claim 9; Page; 92pp; English.
XX
CC The invention relates to a conjugate (I) comprising at least one non-
CC polypeptide moiety (II) (e.g. an N-glycosyl group) covalently attached to

CC a protein C polypeptide comprising an amino acid sequence which differs
CC from that of a parent protein C polypeptide (III) in at least one
CC introduced and/or at least one removed amino acid residue comprising an
CC attachment group for the non-polypeptide group (e.g. an N-glycosylation
CC site). Also included are (1) a variant (IV) of (III) comprising a
CC substitution in a position (P) where (P) is an amino acid with at least
CC 2% of its side group exposed to the surface, with the proviso that the
CC substitution is not Thr24Ser/Ala/His/Lys/Arg/Asn/Asp/Glu/Gly/Gln.
CC Tyr30Ser/Ala/Thr/His/Lys/Arg/Asn/Asp/Glu/Gly/Gln or Phe31Ser/Ala/Thr/
CC His/Lys/Arg/Asn/Asp/Glu/Gly/Gln; (2) a nucleotide sequence (V) encoding
CC (IV); (3) an expression vector (VI) comprising (V); (4) a host cell (VII)
CC comprising (V) or (VI); (5) increasing (M2) the functional in vivo half-
CC life or the serum half-life of a parent protein C polypeptide. The
CC conjugates, variants and protein C proteins are useful as medicaments,
CC and in the manufacture of medicaments for the treatment (and
CC diagnosis/prevention) of stroke, myocardial infarction, after venous
CC thrombosis, disseminated intravascular coagulation (DIC), sepsis, septic
CC shock, emboli e.g. pulmonary emboli, transplantation such as bone marrow
CC transplantation, burns, pregnancy, major surgery/trauma or adult
CC respiratory distress syndrome (ARDS). The variant protein C has an
CC increased resistance to activation by e.g. human plasma and alpha-1
CC antitrypsin. The conjugates have an increased in vivo half-life,
CC increased serum half-life, increased resistance to inhibitors, reduced
CC renal clearance, reduced immunogenicity and/or increased bioavailability.
CC The conjugate offers a number of advantages over the currently available
CC APC products, including longer duration between injections,
CC administration of less protein, and fewer side effects. Moreover, a
CC reduced anticoagulant activity is beneficial to reduce the risk of
CC bleeding while maintaining the antiinflammatory activity of APC
CC (activated protein C) conjugates. This must be especially important when
CC the conjugate has an extended plasma life. The gene for protein C is
CC located on chromosome 2q13-q14. The present sequence represents a zymogen
CC protein C variant of the invention. Note: The present sequence is not
CC shown in the specification but was created by the indexer using the
CC protein C sequence appearing as AAU99002 and the information in claim 9
XX
SQ Sequence 419 AA;
XX
Query Match 99.6%; Score 2314; DB 5; Length 419;
Best Local Similarity 99.5%; Pred. No. 1.4e-142;
Matches 417; Conservative 0; Mismatches 2; Indels 0; Gaps 0;
QY 1 ANSFLELNHSLSEHCIEICDFEFAKEIFONVDDTLAFWSKYVDQCLVPLEHPQA 60
DB 1 ANSFLELNHSLSEHCIEICDFEFAKEIFONVDDTLAFWSKYVDQCLVPLEHPQA 60
QY 61 SLCCGKGTCTDGTGSPSCDRSGMBGRFQGRVSTFLNCSLDNGGCTHYCLEFVGMRRCSC 120
DB 61 SLCCGKGTCTDGTGSPSCDRSGMBGRFQGRVSTFLNCSLDNGGCTHYCLEFVGMRRCSC 120
QY 121 APGYKLGDDLQCHPAVFPFCGRPMKRWKKRSHKKTDEDDQVDRLLDGMFRREG 180
DB 121 APGYKLGDDLQCHPAVFPFCGRPMKRWKKRSHKKTDEDDQVDRLLDGMFRREG 180
QY 181 SPWQVVLDSKSKKLAACGAVLIHPSWLTFAHCOMDSKLLVRLGEYDRLRWEKELDLDI 240
DB 181 SPWQVVLDSKSKKLAACGAVLIHPSWLTFAHCOMDSKLLVRLGEYDRLRWEKELDLDI 240
QY 241 KEVFEHPNYSKSTNDNDIALHLAQPATLSQTIPICLPDSGLAREHINQAGETLVYGM 300
DB 241 KEVFEHPNYSKSTNDNDIALHLAQPATLSQTIPICLPDSGLAREHINQAGETLVYGM 300
QY 301 GYHSSEKAKAKNRFTVLFNFIKIPVPHNECEWMSNMVSENNLCAGILGRDADCEGDS 360
DB 301 GYHSSEKAKAKNRFTVLFNFIKIPVPHNECEWMSNMVSENNLCAGILGRDADCEGDS 360
QY 361 GGPWVASFGITWFLVGLVSWGEGCGILHNYGYTKYSRYLDMWIGHIRDKAPQKSWAP 419
DB 361 GGPWVASFGITWFLVGLVSWGEGCGILHNYGYTKYSRYLDMWIGHIRDKAPQKSWAP 419
RESULT 76
AAU99024

ID AAU99024 standard; protein; 419 AA.
 AC AAU99024;
 DT 23-AUG-2002 (first entry)
 XX Human Protein C zymogen protein mutant K218N/J220T.
 XX Human; Protein C; N-glycosylation; APC; activated protein C; zymogen;
 KW serum half-life; chromosome 2q13-q14; stroke; myocardial infarction;
 KW after venous thrombosis; disseminated intravascular coagulation; DIC;
 KW sepsis; septic shock; embolism; pulmonary embolism; burn; pregnancy;
 KW bone marrow transplantation; major surgery; trauma; ARDS; coagulant;
 KW adult respiratory distress syndrome; alpha-1 antitrypsin; mutant; mucin.
 XX Homo sapiens.
 OS Synthetic.
 FH Key Location/Qualifiers
 FT Protein 1..155
 FT /label= Light_chain
 FT Peptide 156..157
 FT /label= Lys_Arg_dipeptide
 FT Protein 158..419
 FT /label= Heavy_chain
 FT Peptide 158..169
 FT /label= Activation_peptide
 FT Misc-difference 218
 FT /note= "Wild-type Lys substituted by Asn"
 FT Misc-difference 220
 FT /note= "Wild-type Leu substituted by Thr"
 XX WO200232461-A2.
 XX 25-APR-2002.
 XX 15-OCT-2001; 2001MO-DK000679.
 XX 18-OCT-2000; 2000DK-00001560.
 XX 18-OCT-2000; 2000US-0242268P.
 XX 21-JUN-2001; 2001DK-00000970.
 XX 21-JUN-2001; 2001US-0300154P.
 XX [MAX-] MAXYGEN APS.
 PA [MAX-] MAXYGEN HOLDINGS LTD.
 PI Andersen KV, Pedersen AH, Frestgaard PO;
 DR WPI; 2002-489875/52.
 XX Novel conjugate useful for treating or preventing septic shock, stroke
 PT and myocardial infarction, comprises non-polypeptide group covalently
 PT attached to protein C polypeptide comprising an attachment group.
 XX Claim 9; Page; 92pp; English.
 CC The invention relates to a conjugate (I) comprising at least one non-
 CC polypeptide moiety (II) (e.g. an N-glycosyl group) covalently attached to
 CC a protein C polypeptide comprising an amino acid sequence which differs
 CC from that of a parent protein C polypeptide (III) in at least one
 CC introduced and/or at least one removed amino acid residue comprising an
 CC attachment group for the non-polypeptide group (e.g. an N-glycosylation
 CC site). Also included are (1) a variant (IV) of (III) comprising a
 CC substitution in a position (P) where (P) is an amino acid with at least
 CC 25% of its side group exposed to the surface, with the proviso that the
 CC substitution is not Thr245Ser/Ala/His/Lys/Arg/Asp/Glu/Gly/Gln.
 CC Tyr102Ser/Ala/Thr/His/Lys/Arg/Asp/Asn/Asp/Glu/Gly/Gln or Phe316Ser/Ala/Thr/
 CC His/Lys/Arg/Asn/Asp/Glu/Gly/Gln; (2) a nucleotide sequence (V) encoding
 CC (IV); (3) an expression vector (VI) comprising (V); (4) a host cell (VII)
 CC comprising (V) or (VI); (5) increasing (M2) the functional in vivo half-
 CC life or the serum half-life of a parent protein C polypeptide. The
 CC conjugates, variants and protein C proteins are useful as medicaments,
 CC and in the manufacture of medicaments for the treatment (and

CC diagnosis/prevention) of stroke, myocardial infarction, after venous
 CC thrombosis, disseminated intravascular coagulation (DIC), sepsis, septic
 CC shock, emboli e.g. pulmonary emboli, transplantation such as bone marrow
 CC transplantation, burns, pregnancy, major surgery/trauma or adult
 CC respiratory distress syndrome (ARDS). The variant protein C has an
 CC increased resistance to activation by e.g. human plasma and alpha-1
 CC antitrypsin. The conjugates have an increased in vivo half-life,
 CC increased serum half-life, increased resistance to inhibitors, reduced
 CC renal clearance, reduced immunogenicity and/or increased bioavailability.
 CC The conjugate offers a number of advantages over the currently available
 CC APC products, including longer duration between injections,
 CC administration of less protein, and fewer side effects. Moreover, a
 CC reduced anticoagulant activity is beneficial to reduce the risk of
 CC bleeding while maintaining the anti-inflammatory activity of APC
 CC (activated protein C) conjugates. This must be especially important when
 CC the conjugate has an extended plasma life. The gene for protein C is
 CC located on chromosome 2q13-q14. The present sequence represents a zymogen
 CC protein C variant of the invention. Note: The present sequence is not
 CC shown in the specification but was created by the indexer using the
 CC protein C sequence appearing as AAU99002 and the information in claim 9
 XX
 SQ Sequence 419 AA;
 Query Match 99.6%; Score 2314; DB 5; Length 419;
 Best Local Similarity 99.5%; Pred. No. 1.4e-142;
 Matches 417; Conservative 0; Mismatches 2; Indels 0; Gaps 0;
 QY 1 ANSFLELRSSIERCTIEICDPEEKKEI FQVNDTIAFMSKRVDDQCLPLRHHCA 60
 DB 1 ANSFLELRSSIERCTIEICDPEEKKEI FQVNDTIAFMSKRVDDQCLPLRHHCA 60
 QY 61 SLCCGHTCTDGI GSPSCDCRSWGEGF COREYSFANGSLDNGCTHYCCEVGRRCSC 120
 DB 61 SLCCGHTCTDGI GSPSCDCRSWGEGF COREYSFANGSLDNGCTHYCCEVGRRCSC 120
 QY 121 APGYLGDLLIQCPVAPPCGPRPKMKKKSHLKRDTEDQEDVDPPLIDGKXTRRGD 180
 DB 121 APGYLGDLLIQCPVAPPCGPRPKMKKKSHLKRDTEDQEDVDPPLIDGKXTRRGD 180
 QY 181 SPQVQVLLDSKKKLACGAVLTHPQVNTLAHGMDSKSLVLRGEVDLRPMKMLDLDI 240
 DB 181 SPQVQVLLDSKKKLACGAVLTHPQVNTLAHGMDSKSLVLRGEVDLRPMKMLDLDI 240
 QY 241 KEVFHNRYKSTTDDMDIALHLAQPATLSQITVPICLPDSGLAEELNQAQOETLVYGM 300
 DB 241 KEVFHNRYKSTTDDMDIALHLAQPATLSQITVPICLPDSGLAEELNQAQOETLVYGM 300
 QY 301 GTHSSREKEAKRRRTFTVNFILIPVPHNECSBWSNVSNNMLCAGTIGRDQACBDS 360
 DB 301 GTHSSREKEAKRRRTFTVNFILIPVPHNECSBWSNVSNNMLCAGTIGRDQACBDS 360
 QY 361 GGPVVASPHGTWFLVGLVSWGCGGLAHNYGVYTKVSYRLDMHGHTRDPEKAPOKSNAP 419
 DB 361 GGPVVASPHGTWFLVGLVSWGCGGLAHNYGVYTKVSYRLDMHGHTRDPEKAPOKSNAP 419
 XX
 RESULT 77
 AAU99053
 ID AAU99053 standard; protein; 419 AA.
 AC AAU99053;
 DT 23-AUG-2002 (first entry)
 XX Human Protein C zymogen protein mutant R306N/R308S.
 XX Human; Protein C; N-glycosylation; APC; activated protein C; zymogen;
 KW serum half-life; chromosome 2q13-q14; stroke; myocardial infarction;
 KW after venous thrombosis; disseminated intravascular coagulation; DIC;
 KW sepsis; septic shock; embolism; pulmonary embolism; burn; pregnancy;
 KW bone marrow transplantation; major surgery; trauma; ARDS; coagulant;
 KW adult respiratory distress syndrome; alpha-1 antitrypsin; mutant; mucin.

CC	the conigase has an extended plasma life. The gene for protein C is located on chromosome 2q13-q14. The present sequence represents a zymogen protein C variant of the invention. Note: The present sequence is not shown in the specification but was created by the indexer using the CC protein C sequence appearing as AAU99002 and the information in claim 9
XX	Sequence 419 AA:
SQ	
Query Match	99.6%; Score 2314; DB 5; Length 419;
Best Local Similarity	99.58%; Pred. No. 1,4e-142;
Matches 417;	Conservative 0; Mismatches 2; Indels 0; Gaps 0
QY	1 ANSELEELRHSLSRECEIKBEI CDPEFAKEIFQVVDPTLAFMSKHYDGDGCVLPLEHPCA 60
Dd	1 ANSFELEHRHSLSREIEIDCDPEAKEIFQVVDPTLAFMSKHVBDQCIVLPLEHPCA 60
QY	61 SLTCGHGTICIDIGISFSCDCRSWGGRFCQREVSVFLNCSLDNGCTHYCLEEVMRCSC 120
Dd	61 SLTCGHGTICIDIGISFSCDCRSWGGRFCQREVSVFLNCSLDNGCTHYCLEEVMRCSC 120
QY	121 APGYKLGDLLQCHPAVPKPGSRPMKMEKKSHLKPTDEOHOQVDPPLIDGKMTRRGD 180
Dd	121 APGYKLGDLLQCHPAVKPQGRPKMKSKSHLRDTEDQVDPPLIDGKMTTRGD 180
QY	181 SPWQVLVDSKKKLCAGAVLIHPSSVLTAAACMDESCKLVRLGEYDLRRMEKVELDDI 240
Dd	181 SPWQVLVDSKKKLCAGAVLIHPSSVLTAAACMDESCKLVRLGEYDLRRMEKVELDDI 240
QY	241 KEVPHVHVYSSTINDIDLALHLAPRTLSQTTPVICPDGSLAERELNAQAQETLYTGW 300
Dd	241 KEVPHVHVYSSTINDIDLALHLAPRTLSQTTPVICPDGSLAEHELNAQAQETLYTGW 300
QY	301 GHSSSREREAKRNTEFLVNFILPIPVPHNCSEFWSNNVSNMLCAGLGDRQDACEDGS 360
Dd	301 GHSSNSREBAQRNTFLNFIKIPIVPHNCSFWMSNVSENMLCAGLGDRQDACEDGS 360
CY	361 GGPMVASFHGTWFVNGVVSNGRGGLANTGVTTKVSRYLDWIHGTRDKAAPQKSWAP 419
Dd	361 GGPMVASFHGTWFVNGVVSNGRGGLANTGVYTKVSRYLDWIHGTRDKAAPQKSWAP 419
RESULT 78	
AAU99059	
ID	AAU99059 standard; protein; 419 AA.
XX	
AC	AAU99059;
DT	23-AUG-2002 (first entry)
XX	
DE	Human Protein C zymogen protein mutant E309N/K311S.
KX	Human; Protein C; N-glycosylation; APC; activated protein C; zymogen;
KM	serum half-life; chromosome 2q13-q14; stroke; myocardial infarction;
KM	after venous thrombosis; disseminated intravascular coagulation; DIC;
KM	septic shock; embolism; pulmonary embolism; burn; pregnancy;
KM	bone marrow transplantation; major surgery; trauma; coagulant;
KM	adult respiratory distress syndrome; alpha-1 antitrypsin; mutant; mutein.
OS	Homo sapiens.
OS	Synthetic.
XX	
XX	
PH	Key
FT	Protein
FT	/label= Light_chain
FT	Peptide
FT	/label= Lys_Arg_dipeptide
FT	Protein
FT	/label= Heavy_chain
FT	Peptide
FT	/label= Activation_peptide
FT	Misc-difference 309
FT	/note= "Wild-type Glu substituted by Asn"
FT	Misc-difference 311

CC shock, emboli e.g. pulmonary emboli, transplantation such as bone marrow
 CC transplantation, burns, pregnancy, major surgery/trauma or adult
 CC respiratory distress syndrome (ARDS). The variant protein C has an
 CC increased resistance to activation by e.g. human plasma and alpha-1
 CC antitrypsin. The conjugates have an increased in vivo half-life,
 CC increased serum half-life, increased resistance to inhibitors, reduced
 CC renal clearance, reduced immunogenicity and/or increased bioavailability.
 CC The conjugate offers a number of advantages over the currently available
 CC APC products, including longer duration between injections,
 CC administration of less protein, and fewer side effects. Moreover, a
 CC reduced anticoagulant activity is beneficial to reduce the risk of
 CC bleeding while maintaining the antiinflammatory activity of APC
 CC (activated protein C) conjugates. This must be especially important when
 CC the conjugate has an extended plasma life. The gene for protein C is
 CC located on chromosome 2q13-q14. The present sequence represents a zymogen
 CC protein C variant of the invention. Note: The present sequence is not
 CC shown in the specification but was created by the indexer using the
 CC protein C sequence appearing as AAU99002 and the information in claim 9
 XX
 XX Sequence 419 AA:

Query Match 99.5%; Score 2313; DB 5; Length 419;
 Best Local Similarity 99.5%; Pred. No. 1.6e-142;
 Matches 417; Conservative 1; Mismatches 1; Indels 0; Gaps 0;

QY 1 ANSFLEELRHSLEKCEIIEIPEAKE:FNQVNDTLAFSKHVDGQCLVLPPEPCA 50
 Db 1 ANSFLEELRHSLEKCEIIEIPEAKE:FNQVNDTLAFSKHVDGQCLVLPPEPCA 50
 QY 61 SICGSGCTCIDGSGSCDCRSGWGRFCQREVSFLNCSLNGGCTHYCLEEVGRSC 120
 Db 61 SICGSGCTCIDGSGSCDCRSGWGRFCQREVSFLNCSLNGGCTHYCLEEVGRSC 120
 QY 121 APGYKLDDLLQCHPAVPCPCRPKMEKRSKSLKPDTEQEOHVPPLIDGKTRRGD 180
 Db 121 APGYKLDDLLQCHPAVPCPCRPKMEKRSKSLKPDTEQEOHVPPLIDGKTRRGD 180
 QY 181 SFQVTVLINSKTKLACGAVLHPISVLTAAHCDSEKSLVRLGEYDLRERKEWELDI 240
 Db 181 SFQVTVLINSKTKLACGAVLHPISVLTAAHCDSEKSLVRLGEYDLRERKEWELDI 240
 QY 241 KEVFEHRYVSKSTTNDIALHLAQPTLSCTVPICLPDSGLAEKRLNQAQETLVGW 300
 Db 241 KEVFEHRYVSKSTTNDIALHLAQPTLSCTVPICLPDSGLAEKRLNQAQETLVGW 300
 QY 301 GHSSREKEAKRNTFTVLFKIPVPHNECSVSNVYSNNMLCAGIIGDRQDACEDS 360
 Db 301 GHSSREKEAKRNTFTVLFKIPVPHNECSVSNVYSNNMLCAGIIGDRQDACEDS 360
 QY 361 GEPVVASFHGTMVLVGLVSWGEGGLLHNTGVTTKYRSRYLDMIGHIRKEAPQKSNAP 419
 Db 361 GEPVVASFHGTMVLVGLVSWGEGGLLHNTGVTTKYRSRYLDMIGHIRKEAPQKSNAP 419

RESULT 82

AAU99018 standard; protein; 419 AA.

AAU99018;

23-AUG-2002 (first entry)

Human Protein C zymogen protein mutant E215N/K217T.

XX Human; Protein C; N-glycosylation; APC; activated protein C; zymogen;
 KW serum half-life; chromosome 2q13-q14; stroke; myocardial infarction;
 KW after venous thrombosis; disseminated intravascular coagulation; DIC;
 KW sepsis; septic shock; embolism; pulmonary embolism; burns; pregnancy;
 KW bone marrow transplantation; major surgery; trauma; ARDS; coagulant;
 KW adult respiratory distress syndrome; alpha-1 antitrypsin; mutant; mutein.
 XX
 XX Homo sapiens.
 OS Synthetic.

XX Key Location/Qualifiers
 FT Protein 1..155
 FT Peptide /label=light_chain
 FT Peptide 156..157
 FT Protein /label=Lys_Arg_dipeptide
 FT Peptide 158..419
 FT Peptide /label=Heavy_chain
 FT Peptide 158..169
 FT Misc-difference 215
 FT Misc-difference 217 /note="Wild-type Glu substituted by Asn"
 FT Misc-difference 217 /note="Wild-type Lys substituted by Thr"

MO200232461-A2.

25-Apr-2002.

15-OCT-2001; 2001MO-DK00679.

18-OCT-2000; 2000DK-00001560.

18-OCT-2000; 2000US-0242268P.

21-JUN-2001; 2001DK-00000970.

21-JUN-2001; 2001US-0300154P.

(MAXY-) MAXYGEN APS.

(MAXY-) MAXYGEN HOLDINGS LTD.

Andersen KV, Pedersen AH, Freskgard PO;

WPI, 2002-469875/52.

Novel conjugate useful for treating or preventing septic shock, stroke

and myocardial infarction, comprises non-polypeptide group covalently

attached to protein C polypeptide comprising an attachment group.

Claim 9; Page; 92gp; English.

The invention relates to a conjugate (I) comprising at least one non-
 polypeptide moiety (II) (e.g. an N-glycosyl group) covalently attached to
 a protein C polypeptide comprising an amino acid sequence which differs
 from that of a parent protein C polypeptide (III) in at least one
 introduced and/or at least one removed amino acid residue comprising an
 attachment group for the non-polypeptide group (e.g. an N-glycosylation
 site). Also included are (1) a variant (IV) of (III) comprising a
 substitution in a position (P) where (P) is an amino acid with at least
 25% of its side group exposed to the surface, with the proviso that the
 substitution is not Thr245Ser/Ala/Thr/His/Lys/Arg/Asn/Asp/Glu/Gly/Gln/
 His/Lys/Arg/Asn/Asp/Glu/Gly/Gln; (2) a nucleotide sequence (V) encoding
 (IV); (3) an expression vector (VI) comprising (V); (4) a host cell (VII)
 comprising (V) or (VI); (5) increasing (M2) the functional in vivo half-
 life or the serum half-life of a parent protein C polypeptide. The
 conjugates, variants and protein C proteins are useful as medicaments,
 and in the manufacture of medicaments for the treatment (and
 diagnosis/prevention) of stroke, myocardial infarction, after venous
 thrombosis, disseminated intravascular coagulation (DIC), sepsis, septic
 shock, emboli e.g. pulmonary emboli, transplantation such as bone marrow
 transplantation, burns, pregnancy, major surgery/trauma or adult
 respiratory distress syndrome (ARDS). The variant protein C has an
 increased resistance to activation by e.g. human plasma and alpha-1
 antitrypsin. The conjugates have an increased in vivo half-life,
 increased serum half-life, increased resistance to inhibitors, reduced
 renal clearance, reduced immunogenicity and/or increased bioavailability.
 The conjugate offers a number of advantages over the currently available
 APC products, including longer duration between injections,
 administration of less protein, and fewer side effects. Moreover, a
 reduced anticoagulant activity is beneficial to reduce the risk of
 bleeding while maintaining the antiinflammatory activity of APC
 (activated protein C) conjugates. This must be especially important when
 the conjugate has an extended plasma life. The gene for protein C is
 located on chromosome 2q13-q14. The present sequence represents a zymogen

CC protein C variant of the invention. Note: The present sequence is not
CC shown in the specification but was created by the indexer using the
CC protein C sequence appearing as AAU99002 and the information in claim 9
XX
SQ Sequence 419 AA;

Query Match 99.5%; Score 2313; DB 5; Length 419;
Best Local Similarity 99.5%; Pred. No. 1,6e-142;
Matches 417; Conservative 0; Mismatches 2; Indels 0; Gaps 0;

QY 1 ANSFLEELRRSSLEERCIEEICDPEEAKETPQVVDLTAFMSKRVGDCQVLPLEHPCA 60
DB 1 ANSFLEELRRSSLEERCIEEICDPEEAKETPQVVDLTAFMSKRVGDCQVLPLEHPCA 60
QY 61 SLCCGHTCTIDGIGSPSCDGRSGWEGRFQCRREVSLNCSLDNGGCTHYCLEEVRGRCSG 120
DB 61 SLCCGHTCTIDGIGSPSCDGRSGWEGRFQCRREVSLNCSLDNGGCTHYCLEEVRGRCSG 120
QY 121 APGYKLGDDLLQCHPAVFPQGRPWKMKKSHLKRDEDEQVDPRLIDGKMTRRGD 180
DB 121 APGYKLGDDLLQCHPAVFPQGRPWKMKKSHLKRDEDEQVDPRLIDGKMTRRGD 180
QY 181 SPMQVVLDSKKKALCGAVLTHPSWVLTAAHGMDSKKTLVRGCEVDLRREKWEELDDI 240
DB 181 SPMQVVLDSKKKALCGAVLTHPSWVLTAAHGMDSKKTLVRGCEVDLRREKWEELDDI 240
QY 241 KEVFNHNYSKSTTNDIALTLAOPALISQTIIVICLPSGLAERELNOAGQETLVYGM 300
DB 241 KEVFNHNYSKSTTNDIALTLAOPALISQTIIVICLPSGLAERELNOAGQETLVYGM 300
QY 301 GHSSREKAKRRTFVNFKIPVYPNECESESNVSNVBNMLCAGILGRDQACGDS 360
DB 301 GHSSREKAKRRTFVNFKIPVYPNECESESNVSNVBNMLCAGILGRDQACGDS 360
QY 361 GSPWVASFHGTWELVGLVSGEGGLHNYGYTYSYIDWTHGIRPKKAPQKSNAP 419
DB 361 GSPWVASFHGTWELVGLVSGEGGLHNYGYTYSYIDWTHGIRPKKAPQKSNAP 419

RESULT 83

AAU99037 standard; protein; 419 AA.

AAU99037;

23-AUG-2002 (first entry)

Human protein C zymogen protein mutant T253N/D255S.

Human; Protein C; N-glycosylation; APC; activated protein C; zymogen;
Human half-life; chromosome 2q13-q14; stroke; myocardial infarction;
alter venous thrombosis; disseminated intravascular coagulation; DIC;
sepsis; septic shock; embolism; pulmonary embolism; burn; pregnancy;
bone marrow transplantation; major surgery; trauma; ARMS; coagulant;
adult respiratory distress syndrome; alpha-1 antitrypsin; mutant; mucin.

Homo sapiens.
Synthetic.

Location/Qualifiers

Protein 1..155

Peptide /label= Light_chain

Protein /label= Lys_Arg_dipeptide

Peptide /label= Heavy_chain

Misc-difference 253 /label= Activation_peptide

Misc-difference 255 /note= "Wild-type Thr substituted by Asn"

FT /note= "Wild-type Asp substituted by Ser"

PN W0200232461-A2.

XX 25-APR-2002.

XX 15-OCT-2001; 2001WO-DK00679.

XX 18-OCT-2000; 2000DK-00001560.

XX 18-OCT-2000; 2000US-0242268P.

XX 21-JUN-2001; 2001DK-00000970.

XX 21-JUN-2001; 2001US-0300154P.

XX (MAXY-) MAXYGEN AFS.

XX (MAXY-) MAXYGEN HOLDINGS LTD.

XX Andersen KV, Federsen AH, Frestgaard PO;

XX WPI; 2002-489675/52.

XX Novel conjugate useful for treating or preventing septic shock, stroke

XX and myocardial infarction, comprises non-polypeptide group covalently

XX attached to protein C polypeptide comprising an attachment group.

XX Claim 9, Page; 92pp; English.

XX The invention relates to a conjugate (I) comprising at least one non-

XX polypeptide moiety (II) (e.g. an N-glycosyl group) covalently attached to

XX a protein C polypeptide comprising an amino acid sequence which differs

XX from that of a parent protein C polypeptide (III) in at least one

XX introduced and/or at least one removed amino acid residue comprising an

XX attachment group for the non-polypeptide group (e.g. an N-glycosylation

XX site). Also included are (1) a variant (IV) of (III) comprising a

XX substitution in a position (P) where (P) is an amino acid with at least

XX 25% of its side group exposed to the surface, with the proviso that the

XX substitution is not Thr245Ser/Ala/His/Lys/Arg/Asn/Asp/Glu/Gly/Gln/

XX Tyr302Ser/Ala/Thr/His/Lys/Arg/Asn/Asp/Glu/Gly/Gln or Phe316Ser/Ala/Thr/

XX His/Lys/Arg/Asn/Asp/Glu/Gly/Gln; (2) a nucleotide sequence (V) encoding

XX (IV); (3) an expression vector (VI) comprising (V); (4) a host cell (VII)

XX comprising (V) or (VI); (5) increasing (W2) the functional in vivo half-

XX life or the serum half-life of a parent protein C polypeptide. The

XX conjugates, variants and protein C proteins are useful as medicaments,

XX and in the manufacture of medicaments for the treatment (and

XX diagnosis/prevention) of stroke, myocardial infarction, after venous

XX thrombosis, disseminated intravascular coagulation (DIC), sepsis, septic

XX shock, emboli e.g. pulmonary emboli, transplantation such as bone marrow

XX transplantation, burns, pregnancy, major surgery/trauma or adult

XX respiratory distress syndrome (ARDS). The variant protein C has an

XX increased resistance to activation by e.g. human plasma and alpha-1

XX antitrypsin. The conjugates have an increased in vivo half-life,

XX increased serum half-life, increased resistance to inhibitors, reduced

XX renal clearance, reduced immunogenicity and/or increased bioavailability.

XX The conjugate offers a number of advantages over the currently available

XX APC products, including longer duration between injections,

XX administration of less protein, and fewer side effects. Moreover, a

XX reduced anticoagulant activity is beneficial to reduce the risk of

XX bleeding while maintaining the antiinflammatory activity of APC

XX (activated protein C) conjugates. This must be especially important when

XX the conjugate has an extended plasma life. The gene for protein C is

XX located on chromosome 2q13-q14. The present sequence represents a zymogen

XX protein C variant of the invention. Note: The present sequence is not

XX shown in the specification but was created by the indexer using the

XX protein C sequence appearing as AAU99002 and the information in claim 9

XX SQ Sequence 419 AA;

XX Query Match 99.5%; Score 2313; DB 5; Length 419;

XX Best Local Similarity 99.5%; Pred. No. 1,6e-142;

XX Matches 417; Conservative 0; Mismatches 2; Indels 0; Gaps 0;

XX 1 ANSFLEELRRSSLEERCIEEICDPEEAKETPQVVDLTAFMSKRVGDCQVLPLEHPCA 60

DB 1 ANSFLEELRRSSLEERCIEEICDPEEAKETPQVVDLTAFMSKRVGDCQVLPLEHPCA 60

QY 61 SLCCGHTCTIDGIGSPSCDGRSGWEGRFQCRREVSLNCSLDNGGCTHYCLEEVRGRCSG 120

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Db      61 SLCCGHTCIDIGISFSCDCRSQMEGRFCQREVSFLANCSLDNGGCTHCLCEVGMRRCSG 120
Qy      121 APGYKLGDDLLQCHPAKFCGPKRMKRRSHLKRDTEDDEDVDPRLIDKRRRD 180
Db      121 APGYKLGDDLLQCHPAKFCGPKRMKRRSHLKRDTEDDEDVDPRLIDKRRRD 180
Qy      181 SPQVVLDSKKKLACGAVLHPSWLTAAHOMDSKKLVRLGSEYDLRRMKEMLDDI 240
Db      181 SPQVVLDSKKKLACGAVLHPSWLTAAHOMDSKKLVRLGSEYDLRRMKEMLDDI 240
Qy      241 KEVFAHNYSKSTTDNDIALHLAOPATLSQTIIVPICLPDPSGLAEELNOAGQETLVWG 300
Db      241 KEVFAHNYSKSTNSNDIALHLAOPATLSQTIIVPICLPDPSGLAEELNOAGQETLVWG 300
Qy      301 GHSSREKAKRNTFPLNFIKIPVPEHNECSVMNMVSEMLCAGILGRDACEGSS 360
Db      301 GHSSREKAKRNTFPLNFIKIPVPEHNECSVMNMVSEMLCAGILGRDACEGSS 360
Qy      361 GGPVVASFHGTWFLVGVSWGSCGLHNYGVYTKVSRYLDMHGHIDEXAPQKSMAP 419
Db      361 GGPVVASFHGTWFLVGVSWGSCGLHNYGVYTKVSRYLDMHGHIDEXAPQKSMAP 419

RESULT 84
AAU99063
ID      AAU99063 standard; protein; 419 AA.
XX
AC      AAU99063;
XX
DT      23-AUG-2002 (first entry)
XX
DE      Human Protein C zymogen protein mutant R312N/R314S.
XX
XX      Human; Protein C; N-glycosylation; APC; activated protein C; zymogen;
KM      serum half-life; chromosome 2q13-q14; stroke; myocardial infarction;
KM      after venous thrombosis; disseminated intravascular coagulation; DIC;
KM      sepsis; septic shock; embolism; pulmonary embolism; burn; pregnancy;
KM      bone marrow transplantation; major surgery; trauma; AIDS; coagulant;
KM      adult respiratory distress syndrome; alpha-1 antitrypsin; mutant; mteim.
XX
OS      Homo sapiens.
XX
XX      Synthetic.
XX
FH      Key
XX      Location/Qualifiers
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XX      1..155
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XX      /label= Light_chain
XX      156..157
FT      Protein
XX      /label= Lys_Arg_dipeptide
XX      158..419
FT      Peptide
XX      /label= Heavy_chain
XX      158..169
FT      Misc-difference
XX      /label= Activation_peptide
FT      312
XX      /note= "Wild-type Arg substituted by Asn"
FT      314
XX      /note= "Wild-type Arg substituted by Ser"
XX
XX      WO200232461-A2.
XX
XX      25-APR-2002.
XX
XX      15-OCT-2001; 2001MO-DK000679.
XX
XX      18-OCT-2000; 2000DK-00001560.
XX      18-OCT-2000; 2000US-0242268P.
XX      21-JUN-2001; 2001DK-00000970.
XX      21-JUN-2001; 2001US-0300154P.
XX
XX      (MAXY-) MAXYGEN APS.
XX      (MAXY-) MAXYGEN HOLDINGS LTD.
XX
XX      Andersen KV, Pedersen AH, Friesgaard PO;

```

XX
DR

WPI; 2002-489875/52.

PT Novel conjugate useful for treating or preventing septic shock, stroke
and myocardial infarction, comprises non-polypeptide group covalently
attached to protein C polypeptide comprising an attachment group.

PS Claim 9; Page; 92pp; English.

The invention relates to a conjugate (I) comprising at least one non-
polypeptide moiety (II) (e.g. an N-glycosyl group) covalently attached to
a protein C polypeptide comprising an amino acid sequence which differs
from that of a parent protein C polypeptide (III) in at least one
introduced and/or at least one modified amino acid residue comprising an
attachment group for the non-polypeptide group (e.g. an N-glycosylation
site). Also included are (1) a variant (IV) of (III) comprising a
substitution in a position (p) where (P) is an amino acid with at least
25% of its side group exposed to the surface, with the proviso that the
substitution is not Thr245Ser/Ala/His/Lys/Arg/Asn/Asp/Glu/Gly/Gln,
Tyr302Ser/Ala/Thr/His/Lys/Arg/Asn/Asp/Glu/Gly/Gln or Phe315Ser/Ala/Thr/
His/Lys/Arg/Asn/Asp/Glu/Gly/Gln; (2) a nucleotide sequence (V) encoding
(IV); (3) an expression vector (VI) comprising (V); (4) a host cell (VII)
comprising (V) or (VI); (5) increasing (W2) the functional in vivo half-
life or the serum half-life of a parent protein C polypeptide. The
conjugates, variants and protein C proteins are useful as medicaments,
and in the manufacture of medicaments for the treatment (and
thrombosis/prevention) of stroke, myocardial infarction, after venous
thrombosis, disseminated intravascular coagulation (DIC), sepsis, septic
shock, emboli e.g. pulmonary emboli, transplantation such as bone marrow
transplantation, burns, pregnancy, major surgery/trauma or adult
respiratory distress syndrome (ARDS). The variant protein C has an
increased resistance to activation by e.g. human plasma and alpha-1
antitrypsin. The conjugates have an increased in vivo half-life.
increased serum half-life, increased resistance to inhibitors, reduced
renal clearance, reduced immunogenicity and/or increased bioavailability.
The conjugate offers a number of advantages over the currently available
APC products, including longer duration between injections. Moreover, a
administration of less protein, and fewer side effects. Moreover, a
reduced anticoagulant activity is beneficial to reduce the risk of
bleeding while maintaining the antiinflammatory activity of APC
(activated protein C) conjugates. This must be especially important when
the conjugate has an extended plasma life. The gene for protein C is
located on chromosome 2q13-q14. The present sequence represents a zymogen
protein C variant of the invention. Note: The present sequence is not
shown in the specification but was created by the indexer using the
protein C sequence appearing as AAU99002 and the information in claim 9

Sequence 419 AA;

Query Match 99.5%; Score 2313; DB 5; Length 419;

Best Local Similarity 99.5%; Pred. No. 1.6e-142;
Matches 417; Conservative 0; Mismatches 2; Indels 0; Gaps 0;

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Qy      1 ANSLFEIRKSSIERECIEEIOPEBAKIFONDVDTLAWSRHNDGQCVTLPLHPCA 60
Db      1 ANSLFEIRKSSIERECIEEIOPEBAKIFONDVDTLAWSRHNDGQCVTLPLHPCA 60
Qy      61 SLCCGHTCIDIGISFSCDCRSQMEGRFCQREVSFLANCSLDNGGCTHCLCEVGMRRCSG 120
Db      61 SLCCGHTCIDIGISFSCDCRSQMEGRFCQREVSFLANCSLDNGGCTHCLCEVGMRRCSG 120
Qy      121 APGYKLGDDLLQCHPAKFCGPKRMKRRSHLKRDTEDDEDVDPRLIDKRRRD 180
Db      121 APGYKLGDDLLQCHPAKFCGPKRMKRRSHLKRDTEDDEDVDPRLIDKRRRD 180
Qy      181 SPQVVLDSKKKLACGAVLHPSWLTAAHOMDSKKLVRLGSEYDLRRMKEMLDDI 240
Db      181 SPQVVLDSKKKLACGAVLHPSWLTAAHOMDSKKLVRLGSEYDLRRMKEMLDDI 240
Qy      241 KEVFAHNYSKSTTDNDIALHLAOPATLSQTIIVPICLPDPSGLAEELNOAGQETLVWG 300
Db      241 KEVFAHNYSKSTTDNDIALHLAOPATLSQTIIVPICLPDPSGLAEELNOAGQETLVWG 300

```

CC	site). Also included are (I) a variant (IV) of (III) comprising a substitution in a position (P) where (P) is an amino acid with at least 25% of its side group exposed to the surface, with the proviso that the substitution is not Thr245Ser/Ala/His/Lys/Asn/Asp/Gln/Gly/Glu/Tyr302Ser/Ala/Thr/His/Lys/Asn/Asp/Glu/Gln or Pro316Ser/Ala/Thr/His/Lys/Arg/Asn/Glu/Gly/Gln; (2) a nucleotide sequence (V) encoding (IV); (3) an expression vector (VI) comprising (V); (4) a host cell (VII) comprising (V) or (VI); (5) increasing (W2) the functional in vivo half-life or the serum half-life of a parent protein C polypeptide. The conjugate, variants and protein C proteins are useful as medicaments, and in the manufacture of medicaments for the treatment (and diagnosis/prevention) of stroke, myocardial infarction, after venous thrombosis, disseminated intravascular coagulation (DIC), sepsis, septic shock, emboli e.g. pulmonary emboli, transplantation such as bone marrow transplantation, burns, pregnancy, major surgery/trauma or adult respiratory distress syndrome (ARDS). The variant protein C has an increased resistance to activation by e.g. human plasmas and alpha-1 antitrypsin. The conjugates have an increased in vivo half-life, increased serum half-life, increased resistant to inhibitors, reduced renal clearance, reduced immunogenicity and/or increased bioavailability. The conjugate offers a number of advantages over the currently available APC products, including longer duration between injections, administration of less protein, and fewer side effects. Moreover, a reduced anticoagulant activity is beneficial to reduce the risk of bleeding while maintaining the anti-inflammatory activity of APC (activated protein C) conjugates. This must be especially important when the conjugate has an extended plasma life. The gene for protein C is located on chromosome 2q13-q14. The present sequence represents a zymogen protein C variant of the invention. Note: The present sequence is not shown in the specification but was created by the indexer using the protein C sequence appearing as AAU99002 and the information in claim 9
XX	Sequence 419 AA;
SQ	
Query Match	99.5%; Score 2313; DB 5; Length 419;
Best Local Similarity	99.5%; Pred. No. 1.6e-142;
Matches 4177; Conservative	0; Mismatches 2; Indels 0; Gaps 0
DY	1 ANSFLERHSLSRECEIEICDFEAKELFONVDLTAFMSKHVGDQCLVLEHPCA 60
Db	1 ANSFLERHSLSRECEIEICDFEAKELFONVDLTAFMSKHVGDQCLVLEHPCA 60
DY	61 SLCCGHGTCIDIGTGSRCDCRSRGHGFPCOREYSTLNCSDNGCTHYCLEBVGMRSCC 120
Db	61 SLCCGHGTCIDIGTGSRCDCRSRGHGFPCOREYSTLNCSDNGCTHYCLEBVGMRSCC 120
DY	121 APBYKLGDDLQCIPAVRPPCGRPWKMEKKSHXKPTEDQEDVDPLDGMTRRG 180
Db	121 APBYKLGDDLQCIPAVRPPCGRPWKMEKKSHXKPTEDQEDVDPLDGMTRRG 180
DY	181 SPQGVLLDSFKKLACGAVALHPSWVLTAHCWDESKKLTVLGEYDLRRKEKELDLDI 240
Db	181 SPQGVLLDSFKKLACGAVALHPSWVLTAHCWDESKKLTVLGEYDLRRKEKELDLDI 240
DY	241 KEVFVHPNYSKSTTDNDIALHLAQPATLSQTITVPICLPDSGLAEREINQAQGETLVYGN 300
Db	241 KEVFVHPNYSKSTTDNDIALHLAQPATLSQTITVPICLPDSGLAEREINQAQGETLVYGN 300
DY	301 GHSSSEKAEARKNRTYVNLFIPIPVPHNCSVMNNVSANMLCGILIGRDQACGGSS 360
Db	301 GHSSSEKAEARKNRTYVNLFIPIPVPHNCSVMNNVSANMLCGILIGRDQACGGSS 360
DY	361 GGPMVASFHGTWFLVGLVSMGBGCGLAHNYGYTTKYNSYLDMIGHAIRDKAPQKSNAP 419
Db	361 GGPMVASFHGTWFLVGLVSMGBGCGLAHNYGYTTKYNSYLDMIGHAIRDKAPQKSNAP 419
RESULT 86	
AAU99021	
ID	AAU99021 standard; protein; 419 AA.
KX	
CC	AAU99021;

DT 23-AUG-2002 (first entry)

XX Human Protein C zymogen protein mutant K217N/L219S.

XX

KW Human: Protein C; N-glycosylation; APC; activated protein C; zymogen;
 KW serum half-life; chromosome 2q13-q14; stroke; myocardial infarction;
 KW after venous thrombosis; disseminated intravascular coagulation; DIC;
 KW sepsis; septic shock; embolism; pulmonary embolism; burn; pregnancy;
 KW bone marrow transplantation; major surgery; trauma; ARDS; coagulant;
 KW adult respiratory distress syndrome; alpha-1 antitrypsin; mutant; mutein.

XX

OS Homo sapiens.

XX Synthetic.

XX

XX Key

XX Protein

XX Peptide

XX Protein

XX Peptide

XX Misc-difference

XX Misc-difference

XX Misc-difference

XX W0200232461-A2.

XX 25-APR-2002.

XX 15-OCT-2001; 2001WO-DK000679.

XX 18-OCT-2000; 2000DK-00001560.

XX 18-OCT-2000; 2000US-0242368P.

XX 21-JUN-2001; 2001DK-00000970.

XX 21-JUN-2001; 2001US-0300154P.

XX (MAXY-) MAXYGEN APS.

XX (MAXY-) MAXYGEN HOLDINGS LTD.

XX Andersen KV, Pedersen AH, Freaheyard PO;

XX WPI; 2002-489875/52.

XX

XX Novel conjugate useful for treating or preventing septic shock, stroke
 XX and myocardial infarction, comprises non-polypeptide group covalently
 XX attached to protein C polypeptide comprising an attachment group.

XX Claim 9; Page; 92pp; English.

XX

XX The invention relates to a conjugate (I) comprising at least one non-
 XX polypeptide moiety (II) (e.g. an N-glycosyl group) covalently attached to
 XX a protein C polypeptide comprising an amino acid sequence which differs
 XX from that of a parent protein C polypeptide (III) in at least one
 XX introduced and/or at least one removed amino acid residue comprising an
 XX attachment group for the non-polypeptide group (e.g. an N-glycosylation
 XX site). Also included are (1) a variant (IV) of (III) comprising a
 XX substitution in a position (P) where (P) is an amino acid with at least
 XX 25% of its side group exposed to the surface, with the proviso that the
 XX substitution is not Thr245Ser/Ala/His/His/Arg/Asn/Asp/Glu/Gly/Gln/
 XX Tyr302Ser/Ala/Thr/His/Lys/Arg/Asn/Asp/Glu/Gly/Gln or Phe16Ser/Ala/Thr/
 XX His/Lys/Arg/Asn/Asp/Glu/Gly/Gln; (2) a nucleotide sequence (V) encoding
 XX (IV); (3) an expression vector (VI) comprising (V); (4) a host cell (VII)
 XX comprising (V) or (VI); (5) increasing (M2) the functional in vivo half-
 XX life of the serum half-life of a parent protein C polypeptide. The
 XX conjugates, variants and protein C proteins are useful as medicaments,
 XX and in the manufacture of medicaments for the treatment (and
 XX diagnosis/prevention) of stroke, myocardial infarction, after venous
 XX thrombosis, disseminated intravascular coagulation (DIC), sepsis, septic
 XX shock, emboli e.g. pulmonary emboli, transplantation such as bone marrow
 XX transplantation, burns, pregnancy, major surgery/trauma or adult

CC respiratory distress syndrome (ARDS). The variant protein C has an
 CC increased resistance to activation by e.g. human plasma and alpha-1
 CC antitrypsin. The conjugates have an increased in vivo half-life,
 CC increased serum half-life, increased resistance to inhibitors, reduced
 CC renal clearance, reduced immunogenicity and/or increased bioavailability.
 CC The conjugate offers a number of advantages over the currently available
 CC APC products, including longer duration between injections,
 CC administration of less protein, and fewer side effects. Moreover, a
 CC reduced anticoagulant activity is beneficial to reduce the risk of
 CC bleeding while maintaining the antiinflammatory activity of APC
 CC (activated protein C) conjugates. This must be especially important when
 CC the conjugate has an extended plasma life. The gene for protein C is
 CC located on chromosome 2q13-q14. The present sequence represents a zymogen
 CC protein C variant of the invention. Note: The present sequence is not
 CC shown in the specification but was created by the indexer using the
 CC protein C sequence appearing as AA099002 and the information in claim 9

XX

XX Sequence 419 AA;

XX

XX Query Match 99.5%; Score 2313; DB 5; Length 419;
 XX Best Local Similarity 99.5%; Pred. No. 1.66-142;
 XX Matches 417; Conservative 0; Mismatches 2; Indels 0; Gaps 0;

QY 1 ANSPLELHSHSLRECEIEICPEPAKEIFQNVDTLAFMKSHVDGQCLVPLHPQA 60

DB 1 ANSPLELHSHSLRECEIEICPEPAKEIFQNVDTLAFMKSHVDGQCLVPLHPQA 60

QY 61 SLCCGHTGCTGIGSPSCDQSGMGRFCQREVSFLNCSLDNGGCTHCLCEYGMRCSC 120

DB 61 SLCCGHTGCTGIGSPSCDQSGMGRFCQREVSFLNCSLDNGGCTHCLCEYGMRCSC 120

QY 121 APGYKLGDDLQCHPAKFPQGRPMKREKERSHLKEDTEDQDQVDRLLDGMKTRRGD 180

DB 121 APGYKLGDDLQCHPAKFPQGRPMKREKERSHLKEDTEDQDQVDRLLDGMKTRRGD 180

QY 121 APGYKLGDDLQCHPAKFPQGRPMKREKERSHLKEDTEDQDQVDRLLDGMKTRRGD 180

DB 121 APGYKLGDDLQCHPAKFPQGRPMKREKERSHLKEDTEDQDQVDRLLDGMKTRRGD 180

QY 181 SPQVWVLDSSKKKACCAVTLHPSWTLPAACMDSEKSLVRLGRYDLRMEKEHLDLI 240

DB 181 SPQVWVLDSSKKKACCAVTLHPSWTLPAACMDSEKSLVRLGRYDLRMEKEHLDLI 240

QY 241 KEVFEHNSKSTTDNDIALHLAOPATLSQTIYPLCPDSGLARBLNQGRTLYTGW 300

DB 241 KEVFEHNSKSTTDNDIALHLAOPATLSQTIYPLCPDSGLARBLNQGRTLYTGW 300

QY 301 GYHSSEKAKKRNRTFVLFNFIKIPVPEHNECEVMSNMVSENNLCAGILGRQDACEGDS 360

DB 301 GYHSSEKAKKRNRTFVLFNFIKIPVPEHNECEVMSNMVSENNLCAGILGRQDACEGDS 360

QY 361 GGPVNASFHGTWFLVGLVSWGCGILHNYGVYTKYSRYLDWTHIHIDKEAPQSWAP 419

DB 361 GGPVNASFHGTWFLVGLVSWGCGILHNYGVYTKYSRYLDWTHIHIDKEAPQSWAP 419

DE

RESULT 87

AA099004

ID AA099004 standard; protein; 419 AA.

XX

XX AA099004;

XX

XX 23-AUG-2002 (first entry)

XX

XX Human Protein C zymogen protein mutant D172N/K174T.

XX

XX Human: Protein C; N-glycosylation; APC; activated protein C; zymogen;
 KW serum half-life; chromosome 2q13-q14; stroke; myocardial infarction;
 KW after venous thrombosis; disseminated intravascular coagulation; DIC;
 KW sepsis; septic shock; embolism; pulmonary embolism; burn; pregnancy;
 KW bone marrow transplantation; major surgery; trauma; ARDS; coagulant;
 KW adult respiratory distress syndrome; alpha-1 antitrypsin; mutant; mutein.

XX

XX Homo sapiens.

XX OS

XX Synthetic.

XX

XX Key

XX Location/Qualifiers

FT Protein 1..155
 FT /label= light_chain
 FT Peptide 156..157
 FT /label= Lys_Arg_dipeptide
 FT Protein 158..419
 FT /label= Heavy_chain
 FT Peptide 158..169
 FT /label= Activation_peptide
 FT Misc-difference 172
 FT /note= "Wild-type Asp substituted by Asn"
 FT Misc-difference 174
 FT /note= "Wild-type Lys substituted by Thr"
 XX WO200232461-A2.
 XX 25-APR-2002.
 XX 15-OCT-2001; 2001MO-DK000679.
 XX 18-OCT-2000; 2000DK-00001560.
 XX 18-OCT-2000; 2000US-0242268P.
 XX 21-JUN-2001; 2001DK-00000970.
 XX 21-JUN-2001; 2001US-0300154P.
 XX (MAXY-) MAXYGEN APS.
 XX (MAXY-) MAXYGEN HOLDINGS LTD.
 XX Andersen KV, Pedersen AH, Fresgaard PO;
 XX WPI, 2002-489375/52.
 XX
 PT Novel conjugate useful for treating or preventing septic shock, stroke
 PT and myocardial infarction, comprises non-polypeptide group covalently
 PT attached to protein C polypeptide comprising an attachment group.
 XX
 PS Claim 9; Page; 92pp; English.
 XX
 CC The invention relates to a conjugate (I) comprising at least one non-
 CC polypeptide moiety (II) (e.g. an N-glycosyl group) covalently attached to
 CC a protein C polypeptide comprising an amino acid sequence which differs
 CC from that of a parent protein C polypeptide (III) in at least one
 CC introduced and/or at least one removed amino acid residue comprising an
 CC attachment group for the non-polypeptide group (e.g. an N-glycosylation
 CC site). Also included are (1) a variant (IV) of (III) comprising a
 CC substitution in a position (P) where (P) is an amino acid with at least
 CC 25% of its side group exposed to the surface, with the proviso that the
 CC substitution is not Thr245Ser/Ala/His/Lys/Arg/Asn/Asp/Glu/Gly/Gln,
 CC Tyr202Ser/Ala/Thr/His/Lys/Arg/Asn/Asp/Glu/Gly/Gln or Phe16Ser/Ala/Thr/
 CC His/Lys/Arg/Asn/Asp/Glu/Gly/Gln; (2) a nucleotide sequence (V) encoding
 CC (IV); (3) an expression vector (VI) comprising (V); (4) a host cell (VII)
 CC comprising (V) or (VI); (5) increasing (M2) the functional in vivo half-
 CC life of the serum half-life of a parent protein C polypeptide. The
 CC conjugates, variants and protein C proteins are useful as medicaments,
 CC and in the manufacture of medicaments for the treatment (and
 CC diagnosis/prevention) of stroke, myocardial infarction, after venous
 CC thrombosis, disseminated intravascular coagulation (DIC), sepsis, septic
 CC shock, emboli e.g. pulmonary emboli, transplantation such as bone marrow
 CC transplantation, burns, pregnancy, major surgery/trauma or adult
 CC respiratory distress syndrome (ARDS). The variant protein C has an
 CC increased resistance to activation by e.g. human plasma and alpha-1
 CC antitrypsin. The conjugates have an increased in vivo half-life,
 CC increased serum half-life, increased resistance to inhibitors, reduced
 CC renal clearance, reduced immunogenicity and/or increased bioavailability.
 CC The conjugate offers a number of advantages over the currently available
 CC APC products, including longer duration between injections,
 CC administration of less protein, and fewer side effects. Moreover, a
 CC reduced anticoagulant activity is beneficial to reduce the risk of
 CC bleeding while maintaining the anti-inflammatory activity of APC
 CC (activated protein C) conjugates. This must be especially important when
 CC the conjugate has an extended plasma life. The gene for protein C is
 CC located on chromosome 2q13-q14. The present sequence represents a zymogen
 CC protein C variant of the invention. Note: The present sequence is not
 CC shown in the specification but was created by the indexer using the

CC protein C sequence appearing as AAU99002 and the information in claim 9
 XX
 XX Sequence 419 AA;
 SQ
 Query Match 99.5%; Score 2313; DB 5; Length 419;
 Best Local Similarity 99.5%; Pred. No. 1.6e-142;
 Matches 417; Conservative 1; Mismatches 1; Indels 0; Gaps 0;
 QY 1 ANSLFLETRHSSLEBRCTEEICDEEAKETPQNVDTPLATWSKGVGDCQVLTPLHPCA 60
 DB 1 ANSFLERHSSLEBRCTEEICDEEAKETPQNVDTPLATWSKGVGDCQVLTPLHPCA 60
 QY 61 SLCCGHTCTIDGIGSFSCDCRSQMEGRFCQREVSFLNCSLDNGCTHYGCEVGRRCSC 120
 DB 61 SLCCGHTCTIDGIGSFSCDCRSQMEGRFCQREVSFLNCSLDNGCTHYGCEVGRRCSC 120
 QY 121 APGYKGGDILQCHPAVVFPCGRPWKRMEKRSKSLKRDTEDEQDQVDPRLIDGKMTRRGD 180
 DB 121 APGYKGGDILQCHPAVVFPCGRPWKRMEKRSKSLKRDTEDEQDQVDPRLIDGKMTRRGD 180
 QY 181 SPQGVVLLDSKKKLACGAVLHPSVLTAAACMDESCKLLVRIGETDLRRWRKSLDLDI 240
 DB 181 SPQGVVLLDSKKKLACGAVLHPSVLTAAACMDESCKLLVRIGETDLRRWRKSLDLDI 240
 QY 241 KEVFHPNYSKSTTNDIALHLAQPATLSQITVPICLPDSGLAERELNOAQGETVLTGW 300
 DB 241 KEVFHPNYSKSTTNDIALHLAQPATLSQITVPICLPDSGLAERELNOAQGETVLTGW 300
 QY 301 GYHSSREKAKENRTFVNFVKIIPVPHNECEVMSNNVSENNLCAGILGDRDACEGDS 360
 DB 301 GYHSSREKAKENRTFVNFVKIIPVPHNECEVMSNNVSENNLCAGILGDRDACEGDS 360
 QY 361 GSPWVASFGTWFVLGLVSMGEGGGLHNYGYTKVSRKYDWHGIRPKAPKSNAP 419
 DB 361 GSPWVASFGTWFVLGLVSMGEGGGLHNYGYTKVSRKYDWHGIRPKAPKSNAP 419
 XX
 XX RESULT 88
 XX AAU99041
 XX ID AAU99041 standard; protein, 419 AA.
 XX
 XX AAU99041;
 XX AC
 XX 23-AUG-2002 (first entry)
 XX
 XX Human Protein C zymogen protein mutant D255N/D257S.
 XX
 XX Homo sapiens.
 OS Synthetic.
 OS
 XX Key Location/Qualifiers
 FH Protein 1..155
 FT Peptide 156..157
 FT /label= light_chain
 FT Protein 158..419
 FT /label= Lys_Arg_dipeptide
 FT Peptide 158..169
 FT /label= Heavy_chain
 FT Misc-difference 255
 FT /label= Activation_peptide
 FT Misc-difference 257
 FT /note= "Wild-type Asp substituted by Asn"
 FT Misc-difference 257
 FT /note= "Wild-type Asp substituted by Ser"
 XX
 XX WO200232461-A2.

PD 25-APR-2002.
 XX 15-OCT-2001; 2001MO-DK000679.
 PF 18-OCT-2000; 2000DK-00001560.
 PR 18-OCT-2000; 2000US-0242268P.
 PR 21-JUN-2001; 2001DK-00000970.
 PR 21-JUN-2001; 2001US-0300154P.
 XX
 PA (MAXY-) MAXYGEN APS.
 PA (MAXY-) MAXYGEN HOLDINGS LTD.
 PI Andersen KV, Pedersen AH, Freskgaard PO;
 DR WPI; 2002-489875/52.
 XX
 PT Novel conjugate useful for treating or preventing septic shock, stroke
 PT and myocardial infarction, comprises non-polypeptide group covalently
 PT attached to protein C polypeptide comprising an attachment group.
 XX
 PS Claim 9; Page; 92pp; English.
 XX
 CC The invention relates to a conjugate (I) comprising at least one non-
 CC polypeptide moiety (II) (e.g. an N-glycosyl group) covalently attached to
 CC a protein C polypeptide comprising an amino acid sequence which differs
 CC from that of a parent protein C polypeptide (III) in at least one
 CC introduced and/or at least one removed amino acid residue comprising an
 CC attachment group for the non-polypeptide group (e.g. an N-glycosylation
 CC site). Also included are (1) a variant (IV) of (III) comprising a
 CC substitution in a position (P) where (P) is an amino acid with at least
 CC 25% of its side group exposed to the surface, with the proviso that the
 CC substitution is not Thr245Ser/Ala/His/Lys/Arg/Asn/Asp/Glu/Gly/Gln,
 CC Tyr303Ser/Ala/Thr/His/Lys/Arg/Asn/Asp/Glu/Gly/Gln or Phe316Ser/Ala/Thr/
 CC His/Lys/Arg/Asn/Asp/Glu/Gly/Gln; (2) a nucleotide sequence (V) encoding
 CC (IV); (3) an expression vector (VI) comprising (V); (4) a host cell (VII)
 CC comprising (V) or (VI); (5) increasing (M2) the functional in vivo half-
 CC life of the serum half-life of a parent protein C polypeptide. The
 CC conjugates, variants and protein C proteins are useful as medicaments,
 CC and in the manufacture of medicaments for the treatment and
 CC diagnosis/prevention of stroke, myocardial infarction, after venous
 CC thrombosis, disseminated intravascular coagulation (DIC), sepsis, septic
 CC shock, emboli e.g. pulmonary emboli, transplantation such as bone marrow
 CC transplantation, burns, pregnancy, major surgery/trauma or adult
 CC respiratory distress syndrome (ARDS). The variant protein C has an
 CC increased resistance to activation by e.g. human plasma and alpha-1
 CC antitrypsin. The conjugates have an increased in vivo half-life,
 CC increased serum half-life, increased resistant to inhibitors, reduced
 CC renal clearance, reduced immunogenicity and/or increased bioavailability.
 CC The conjugate offers a number of advantages over the currently available
 CC APC products, including longer duration between injections,
 CC administration of less protein, and fewer side effects. Moreover, a
 CC reduced anticoagulant activity is beneficial to reduce the risk of
 CC bleeding while maintaining the anti-inflammatory activity of APC
 CC (activated protein C) conjugates. This must be especially important when
 CC the conjugate has an extended plasma life. The gene for protein C is
 CC located on chromosome 2q13-q14. The present sequence represents a zymogen
 CC protein C variant of the invention. Note: The present sequence is not
 CC shown in the specification but was created by the indexer using the
 CC protein C sequence appearing as AAU99002 and the information in claim 9
 XX
 SQ Sequence 419 AA;
 Query Match 99.5%; Score 2313; DB 5; Length 419;
 Best Local Similarity 99.5%; Pred. No. 1.6e-142;
 Matches 417; Conservative 1; Mismatches 1; Indels 0; Gaps 0;
 QY 1 ANSFRLHSHSIRECEIEICDPEBAKEIKQNDOTLAFNSKHNDGQCLVPLHPRA 60
 DB 1 ANSFRLHSHSIRECEIEICDPEBAKEIKQNDOTLAFNSKHNDGQCLVPLHPRA 60
 QY 61 SLCCGGTCTIDIGSFCSCDRSGMEGRFCQREVSFLNCSLDNGGCTHCLAEYGMRCSC 120
 DB 61 SLCCGGTCTIDIGSFCSCDRSGMEGRFCQREVSFLNCSLDNGGCTHCLAEYGMRCSC 120

QY 121 APGYKGDLLIQCHPAVKPFCGRPMKREKRSKSLKADTEDEQGVDPRLIDSKMRRGD 180
 DB 121 APGYKGDLLIQCHPAVKPFCGRPMKREKRSKSLKADTEDEQGVDPRLIDSKMRRGD 180
 QY 181 SPQVLLIDSKKILACAVLHPISWLTAAHCDSESKLLVILGKYDIRMEKELELDLI 240
 DB 181 SPQVLLIDSKKILACAVLHPISWLTAAHCDSESKLLVILGKYDIRMEKELELDLI 240
 QY 241 KEVFAHENSSTTDNDIALHLAQPATLSGTYPICLPDSGLARELNQAQGTLYTGM 300
 DB 241 KEVFAHENSSTTDNDIALHLAQPATLSGTYPICLPDSGLARELNQAQGTLYTGM 300
 QY 301 GYSSSRKEAKRNTFYLANFIKIPVPHNECEYSNMTSEMLCAGLGDRODACEGDS 360
 DB 301 GYSSSRKEAKRNTFYLANFIKIPVPHNECEYSNMTSEMLCAGLGDRODACEGDS 360
 QY 361 GGMVASFHGTWFLVGLVSWGECGLHNYGVYTKVSRYLDTNIGHIRDEKAPQKSMAP 419
 DB 361 GGMVASFHGTWFLVGLVSWGECGLHNYGVYTKVSRYLDTNIGHIRDEKAPQKSMAP 419
 RESULT 89
 AAU99064
 ID AAU99064 standard; protein: 419 AA.
 XX
 AC AAU99064;
 DT 23-AUG-2002 (first entry)
 XX
 DE Human Protein C zymogen protein mutant R312N/R314T.
 XX
 XX Human; Protein C; N-glycosylation; APC; activated protein C; zymogen;
 KW serum half-life; chromosome 2q13-q14; stroke; myocardial infarction;
 KW after venous thrombosis; disseminated intravascular coagulation; DIC;
 KW sepsis; septic shock; embolism; pulmonary embolism; burn; pregnancy;
 KW bone marrow transplantation; major surgery; trauma; ARDS; coagulant;
 KW adult respiratory distress syndrome; alpha-1 antitrypsin; mutant; mutein.
 XX
 OS Homo sapiens.
 XX
 FH Synthetic.
 FH Key Location/Qualifiers
 FT Protein 1..155
 FT Peptide /label= Light_chain
 FT Peptide 156..157
 FT Protein /label= Lys_Arg_dipeptide
 FT Peptide 158..419
 FT Peptide /label= Heavy_chain
 FT Peptide 158..169
 FT Misc-difference 312 /label= Activation_peptide
 FT FT /note= "Wild-type Arg substituted by Asn"
 FT FT Misc-difference 314 /note= "Wild-type Arg substituted by Thr"
 PN WC200232461-A2.
 XX
 PD 25-APR-2002.
 XX
 PF 15-OCT-2001; 2001MO-DK000679.
 PR 18-OCT-2000; 2000DK-00001560.
 PR 18-OCT-2000; 2000US-0242268P.
 PR 21-JUN-2001; 2001DK-00000970.
 PR 21-JUN-2001; 2001US-0300154P.
 XX
 PA (MAXY-) MAXYGEN APS.
 PA (MAXY-) MAXYGEN HOLDINGS LTD.
 PI Andersen KV, Pedersen AH, Freskgaard PO;
 DR WPI; 2002-489875/52.

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PT and myocardial infarction, comprises non-polypeptide group covalently
PT attached to protein C polypeptide comprising an attachment group.
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XX
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CC polypeptide moiety (II) (e.g. an N-glycosyl group) covalently attached to
CC a protein C polypeptide comprising an amino acid sequence which differs
CC from that of a parent protein C polypeptide (III) in at least one
CC introduced and/or at least one removed amino acid residue comprising an
CC attachment group for the non-polypeptide group (e.g. an N-glycosylation
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CC Tyr302Ser/Ala/Thr/His/Lys/Arg/Asn/Asp/Glu/Gly/Gln or Phe316Ser/Ala/Thr/
CC His/Lys/Arg/Asn/Asp/Glu/Gly/Gln; (2) a nucleotide sequence (V) encoding
CC (IV); (3) an expression vector (VI) comprising (V); (4) a host cell (VII)
CC comprising (V) or (VI); (5) increasing (M2) the functional in vivo half-
CC life or the serum half-life of a parent protein C polypeptide. The
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CC and in the manufacture of medicaments for the treatment of and
CC diagnosis/prevention of stroke, myocardial infarction, after venous
CC thrombosis, disseminated intravascular coagulation (DIC), sepsis, septic
CC shock, emboli e.g. pulmonary emboli, transplantation such as bone marrow
CC transplantation, burns, pregnancy, major surgery/trauma or adult
CC respiratory distress syndrome (ARDS). The variant protein C has an
CC increased resistance to activation by e.g. human plasma and alpha-1
CC antitrypsin. The conjugates have an increased in vivo half-life,
CC increased serum half-life, increased resistance to inhibitors, reduced
CC renal clearance, reduced immunogenicity and/or increased bioavailability.
CC The conjugate offers a number of advantages over the currently available
CC APC products, including longer duration between injections, a
CC administration of less protein, and fewer side effects. Moreover, a
CC reduced anticoagulant activity is beneficial to reduce the risk of
CC bleeding while maintaining the antiinflammatory activity of APC
CC (activated protein C) conjugates. This must be especially important when
CC the conjugate has an extended plasma life. The gene for protein C is
CC located on chromosome 2q13-q14. The present sequence represents a zymogen
CC protein C variant of the invention. Note: The present sequence is not
CC shown in the specification but was created by the indexer using the
CC protein C sequence appearing as Adu99002 and the information in claim 9
CC
XX
XX
SQ Sequence 419 AA;

Query Match 99.5%; Score 2313; DB 5; Length 419;
Best Local Similarity 99.5%; Pred. No. 1.6e-142;
Matches 417; Conservative 0; Mismatches 2; Indels 0; Gaps 0;

QY 1 ANSFLELRSSLERECIEICDFEAKELFQNVDTLAFMSKRVGVDDCIWLPLEPCA 60
DB 1 ANSFLELRSSLERECIEICDFEAKELFQNVDTLAFMSKRVGVDDCIWLPLEPCA 60
QY 61 SLCCGHHGCTIDGIGSFSCDCRSQWEGRFQREVSFLNSLDNGCTHYCLAEVGRRCSC 120
DB 61 SLCCGHHGCTIDGIGSFSCDCRSQWEGRFQREVSFLNSLDNGCTHYCLAEVGRRCSC 120
QY 121 AAGYLGDDLLQCHPAVYKPCGRPMKMEKSKSHKRTEDQEDQVDPPLDIGNKTRRGD 180
DB 121 AAGYLGDDLLQCHPAVYKPCGRPMKMEKSKSHKRTEDQEDQVDPPLDIGNKTRRGD 180
QY 181 SPQGVLLDSKKKLAAGAVLHPMSVLTAAHCWDSKKLLVRLGEVDLARWEKMLDDI 240
DB 181 SPQGVLLDSKKKLAAGAVLHPMSVLTAAHCWDSKKLLVRLGEVDLARWEKMLDDI 240
QY 241 KEVFNHNSKSTTNDIALHLAQPATLSQITVPCIPDSGLAEHLINQAQETLVYGM 300
DB 241 KEVFNHNSKSTTNDIALHLAQPATLSQITVPCIPDSGLAEHLINQAQETLVYGM 300
QY 301 GHSSREKAKRRTVNLFIKIPVPHNCSFVSNVSENMICAGILGRDQACEGDS 360
DB 301 GHSSREKAKRRTVNLFIKIPVPHNCSFVSNVSENMICAGILGRDQACEGDS 360

DB 301 GHSSREKAKRRTVNLFIKIPVPHNCSFVSNVSENMICAGILGRDQACEGDS 360
QY 361 GGPWVASFHGTWELVGLVSNWGGCGGLHAYGYTTSXYLDMHGHTRKPAPOKSNAP 419
DB 361 GGPWVASFHGTWELVGLVSNWGGCGGLHAYGYTTSXYLDMHGHTRKPAPOKSNAP 419

RESUR 90
AAU99082
ID AAU99082 standard; protein; 419 AA.
AC AAU99082;
DT 23-AUG-2002 (first entry)
XX Human Protein C zymogen protein mutant D351N/Q353T.
DE Human Protein C; N-glycosylation; APC; activated protein C; zymogen;
KW serum half-life; chromosome 2q13-q14; stroke; myocardial infarction;
KW after venous thrombosis; disseminated intravascular coagulation; DIC;
KW sepsis; septic shock; embolism; pulmonary embolism; burn; pregnancy;
KW bone marrow transplantation; major surgery; trauma; coagulant;
KW adult respiratory distress syndrome; alpha-1 antitrypsin; mutant; mutein.
XX
OS Homo sapiens.
OS Synthetic.
PH Key Location/Qualifiers
FT Protein 1..155
FT Peptide /label= Light_chain
FT Peptide /label= Lys_Arg_dipeptide
FT Protein /label= Heavy_chain
FT Peptide /label= Heavy_chain
FT Peptide /label= Activation_peptide
FT Misc-difference 351 /note= "Wild-type Asp substituted by Asn"
FT Misc-difference 353 /note= "Wild-type Gln substituted by Thr"
FT FT /note= "Wild-type Gln substituted by Thr"
PN WD200232461-A2.
PD 25-APR-2002.
XX
PF 15-DCR-2001; 2001MO-DK000679.
XX
PR 18-DCR-2000; 2000DK-00001560.
PR 18-DCR-2000; 2000US-0242268P.
PR 21-JUN-2001; 2001DK-00000970.
PR 21-JUN-2001; 2001US-0300154P.
XX
PA (MAXY-) MAXYGEN APS.
PA (MAXY-) MAXYGEN HOLDINGS LTD.
XX
PI Andersen KV, Pedersen AH, Freskgaard PO;
XX
DR WPI; 2002-489875/52.
XX
PT Novel conjugate useful for treating or preventing septic shock, stroke
PT and myocardial infarction, comprises non-polypeptide group covalently
PT attached to protein C polypeptide comprising an attachment group.
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PS Claim 9; Page: 92pp; English.
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XX The invention relates to a conjugate (I) comprising at least one non-
CC polypeptide moiety (II) (e.g. an N-glycosyl group) covalently attached to
CC a protein C polypeptide comprising an amino acid sequence which differs
CC from that of a parent protein C polypeptide (III) in at least one
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CC site). Also included are (1) a variant (IV) of (III) comprising a
CC substitution in a position (P) where (P) is an amino acid with at least

Query Match	99.5%	Score 2313	DB 5	Length 419
Best Local Similarity	99.5%	Pred. No. 1.6e-142		
Matches 417; Conservative	1	Mismatches 1	Indels 0	Gaps 0

DE	Human Protein C zymogen protein mutant K191N/K193T.	
XX	Human; Protein C; N-glycosylation; APC; activated protein C; zymogen;	
KM	serum half-life; chromosome 2q13-q14; stroke; myocardial infarction;	
KM	after venous thrombosis; disseminated intravascular coagulation; DIC;	
KM	sepsis; septic shock; embolism; pulmonary embolism; pregnancy;	
KM	bone marrow transplantation; major surgery; trauma; ARDS; coagulant;	
KM	adult respiratory distress syndrome; alpha-1 antitrypsin; mutant; mutein.	
XX		
OS	Homo sapiens.	
XX	Synthetic.	
PH	Key	Location/Qualifiers
FT	Protein	1..155
FT		/label=Light_chain
FT	Peptide	156..157
FT		/label=Lys_Arg_dipeptide
FT	Protein	158..419
FT		/label=Heavy_chain
FT	Peptide	158..169
FT		/label=Activation_peptide
FT	Misc-difference 191	
FT		/note="Wild-type Lys substituted by Asn"
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FT		/note="Wild-type Lys substituted by Thr"
XX		
PM	WC2002232461-A2.	
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PD	25-APR-2002.	
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PF	15-OCT-2001; 2001WO-DK00679.	
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PR	18-OCT-2000; 2000DK-00001560.	
PR	18-OCT-2000; 2000US-024286P.	
PR	21-JUN-2001; 2001DK-00009370.	
PR	21-JUN-2001; 2001US-0300154P.	
XX		
PA	(MAXY-) MAXYGEN APS.	
PA	(MAXY-) MAXYGEN HOLDINGS LTD.	
XX		
PI	Andersen KV, Pedersen AH, Frelsgaard PO;	
XX		
DR	WPI; 2002-489875/52.	
XX		
PT	Novel conjugate useful for treating or preventing septic shock, stroke	
PT	and myocardial infarction, comprises non-polypeptide group covalently	
PT	attached to protein C polypeptide comprising an attachment group.	
XX		
PS	Claim 9; Page: 92pp; English.	
XX		
CC	The invention relates to a conjugate (I) comprising at least one non-	
CC	polypeptide moiety (II) (e.g. an N-glycosyl group) covalently attached to	
CC	a protein C polypeptide comprising an amino acid sequence which differs	
CC	from that of a parent protein C polypeptide (III) in at least one	
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CC	attachment group for the non-polypeptide group (e.g. an N-glycosylation	
CC	site). Also included are (1) a variant (IV) of (III) comprising a	
CC	substitution in a position (p) where (p) is an amino acid with at least	
CC	25% of its side group exposed to the surface, with the proviso that the	
CC	substitution is not Thr194Ser/Ala194His/Lys/Arg/Asn/Asp/Glu/Gly/Gln/	
CC	Tyr323Ser/Ala194Thr/His/Lys/Arg/Asn/Asp/Glu/Gly/Gln or Phe135Ser/Ala194Thr/	
CC	His194Arg/Asn/Asp/Glu/Gly/Gln; (2) a nucleotide sequence (V) encoding	
CC	(IV); (3) an expression vector (VI) comprising (V); (4) a host cell (VIII)	
CC	comprising (V) or (VI); (5) increasing (M2) the functional in vivo half-	
CC	life of the serum half-life of a parent protein C polypeptide. The	
CC	conjugates, variants and protein C proteins are useful as medicaments,	
CC	and in the manufacture of medicines for the treatment (and	
CC	diagnosis/prevention) of stroke, myocardial infarction, after venous	
CC	thrombosis, disseminated intravascular coagulation (DIC), sepsis, septic	
CC	shock, emboli e.g. pulmonary emboli, transplantation such as bone marrow	
CC	transplantation, burns, pregnancy, major surgery/trauma or adult	
CC	respiratory distress syndrome (ARDS). The variant protein C has an	
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 CC increased serum half-life, increased resistant to inhibitors, reduced
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 CC protein C variant of the invention. Note: The present sequence is not
 CC shown in the specification but was created by the indexer using the
 CC protein C sequence appearing as AAU99002 and the information in claim 9
 XX
 XX Sequence 419 AA;

Query Match 99.5%; Score 213; DB 5; Length 419;
 Best Local Similarity 99.5%; Pred. No. 1.6e-142;
 Matches 417; Conservative 0; Mismatches 2; Indels 0; Gaps 0;

QY 1 ANSFLELRHSLRECEIEICDFEAKETQNDVTLAPMSKHYDQCLVPLAPRA 60
 Db 1 ANSFLELRHSLRECEIEICDFEAKETQNDVTLAPMSKHYDQCLVPLAPRA 60
 QY 61 SLCCGHCITCIDIGSFSQDCRSWSEGRPCQREVSLNCSLDNGCCTHYCLEEYGMRCSC 120
 Db 61 SLCCGHCITCIDIGSFSQDCRSWSEGRPCQREVSLNCSLDNGCCTHYCLEEYGMRCSC 120
 QY 121 APGYKIGDDLLQCHPAVPCPGRPWEMREKRSLSKRTDEDEDVDEPRLLIDSKMTRGD 180
 Db 121 APGYKIGDDLLQCHPAVPCPGRPWEMREKRSLSKRTDEDEDVDEPRLLIDSKMTRGD 180
 QY 181 SPMQVVLDSKKKLLAGAVLIHPSWVLAACHMESKLLVLTGYDLRRMEKPELDLI 240
 Db 181 SPMQVVLDSKKKLLAGAVLIHPSWVLAACHMESKLLVLTGYDLRRMEKPELDLI 240
 QY 241 KEFVHPNYSKSTTDNDIALHLAQPATLSOTIVPLCPDSGLAREINMQGETLVYTM 300
 Db 241 KEFVHPNYSKSTTDNDIALHLAQPATLSOTIVPLCPDSGLAREINMQGETLVYTM 300
 QY 301 GHSSSEKEAKNRRTFVLANFKIPVPHNECSYMSNMVSENNLCAGILGRDACEGDS 360
 Db 301 GHSSSEKEAKNRRTFVLANFKIPVPHNECSYMSNMVSENNLCAGILGRDACEGDS 360
 QY 361 GGPVWASPHGIMFLVGLVSWEGCGLLHNYGVTKSRVYDMTHIGHIDKEAPQKSWAP 419
 Db 361 GGPVWASPHGIMFLVGLVSWEGCGLLHNYGVTKSRVYDMTHIGHIDKEAPQKSWAP 419

RESULT 92
 AAU99040
 ID AAU99040 standard; protein, 419 AA.

XX AC AAU99040;
 XX DT 23-AUG-2002 (first entry)
 XX DE Human Protein C zymogen protein mutant T254N/N256T.

XX KW Human, Protein C; N-glycosylation; APC; activated protein C; zymogen;
 KW serum half-life; chromosome 2q13-q14; stroke; myocardial infarction;
 KW after venous thrombosis; disseminated intravascular coagulation; DIC;
 KW sepsis; septic shock; embolism; pulmonary embolism; burn; pregnancy;
 KW bone marrow transplantation; major surgery; trauma; AADS; coagulant;
 KW adult respiratory distress syndrome; alpha-1 antitrypsin; mutant; nuclein.

XX OS Homo sapiens.
 XX OS Synthetic.
 XX PH Key
 FT Protein
 FT 1.155 Location/Qualifiers
 FT /label= light_chain

PT Peptide 156..157
 PT /label= Lys_Arg_dipeptide
 PT Protein 158..419
 PT /label= Heavy_chain
 PT Peptide 158..169
 PT /label= Activation_peptide
 PT Misc-difference 254
 PT /note= "Wild-type Thr substituted by Asn"
 PT Misc-difference 256
 PT /note= "Wild-type Asn substituted by Thr"
 XX WO200223461-A2.
 XX 25-APR-2002.
 XX 15-OCT-2001; 2001MO-DK000679.
 XX 18-OCT-2000; 2000DK-00001560.
 XX 18-OCT-2000; 2000US-0242268P.
 XX 21-JUN-2001; 2001US-00000970.
 XX 21-JUN-2001; 2001US-0300154P.
 XX (MAXY-) MAXYGEN ABS.
 XX (MAXY-) MAXYGEN HOLDINGS LTD.
 XX Andersen KV, Pedersen AH, Freaekgaard PO;
 XX NPI, 2002-489875/52.
 XX Novel conjugate useful for treating or preventing septic shock, stroke
 XX and myocardial infarction, comprises non-polypeptide group covalently
 XX attached to protein C polypeptide comprising an attachment group.
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 CC 2% of its side group exposed to the surface, with the proviso that the
 CC substitution is not Thr245Ser/Ala/His/Lys/Arg/Glu/Gly/Gln or Phe316Ser/Ala/Thr/
 CC Tyr302Ser/Ala/Thr/His/Lys/Arg/Asn/Asp/Glu/Gly/Gln or Phe316Ser/Ala/Thr/
 CC His/Lys/Arg/Asn/Asp/Glu/Gly/Gln; (2) a nucleotide sequence (V) encoding
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 CC protein C sequence appearing as AAU99002 and the information in claim 9

SQ	Sequence 419 AA;	
Query Match	99.5%; Score 2313; DB 5; Length 419;	
Best Local Similarity	99.5%; Pred. No. 1,66-142;	
Matches 417; Conservative	0; Mismatches 2; Indels 0; Gaps 0;	
QY	1 ANSFLEELRHSSLEKCEIEICDPEEAKETIQVNDDTLAFWSKVYDQGLVPLEHPCA 60	
DB	1 ANSFLEELRHSSLEKCEIEICDPEEAKETIQVNDDTLAFWSKVYDQGLVPLEHPCA 60	
QY	61 SLCCGHTCIDIGISGFCDCRSGEGRFCQREVSFLNCSLDNGGCTHYCLEEVRRCSC 120	
DB	61 SLCCGHTCIDIGISGFCDCRSGEGRFCQREVSFLNCSLDNGGCTHYCLEEVRRCSC 120	
QY	121 ARGYLGDLDLQCHPAVYKPCGRPWKMEKKRSHLKRPTDEQVDPRLDGKMTREGD 160	
DB	121 ARGYLGDLDLQCHPAVYKPCGRPWKMEKKRSHLKRPTDEQVDPRLDGKMTREGD 160	
QY	181 SPWQVLLDSKKLACGAVLIHPSWVLTAAHCKWDSKKLLVRLGEYDLRRWEKPELDLDI 240	
DB	181 SPWQVLLDSKKLACGAVLIHPSWVLTAAHCKWDSKKLLVRLGEYDLRRWEKPELDLDI 240	
QY	241 KEVFEHNVSKSTTNDIALHLAQPATLSQTTVPICLPDSGLAEKELNQAQETLVYGV 300	
DB	241 KEVFEHNVSKSTTNDIALHLAQPATLSQTTVPICLPDSGLAEKELNQAQETLVYGV 300	
QY	301 GHSSREKEAKRRRTVNFETKIPIVPHNCSFVSNVSNVSNMCGITIGDRQDACEGDS 360	
DB	301 GHSSREKEAKRRRTVNFETKIPIVPHNCSFVSNVSNVSNMCGITIGDRQDACEGDS 360	
QY	361 GSPWVASPHGTWELVNGVSMGEGCGLLHNVGVYTKVSRYLDMIGHIRDEKAPQKSNAP 419	
DB	361 GSPWVASPHGTWELVNGVSMGEGCGLLHNVGVYTKVSRYLDMIGHIRDEKAPQKSNAP 419	
RESULT 93		
AU99060		
ID	AU99060 standard; protein; 419 AA.	
XX		
AC	AU99060;	
XX		
DT	23-AUG-2002 (first entry)	
XX		
DE	Human Protein C zymogen protein mutant E309N/K311T.	
XX		
KW	Human; Protein C; N-glycosylation; APC; activated protein C; zymogen;	
KW	serum half-life; chromosome 2q13-q14; stroke; myocardial infarction;	
KW	after venous thrombosis; disseminated intravascular coagulation; DIC;	
KW	sepsis; septic shock; embolism; pulmonary embolism; burn; pregnancy;	
KW	bone marrow transplantation; major surgery; trauma; ARDS; coagulant;	
XX	adult respiratory distress syndrome; alpha-1 antitrypsin; mutant; mutein.	
OS	Homo sapiens.	
OS	Synthetic.	
XX		
FH	Key	
FT	Protein	Location/Qualifiers
FT	Peptide	1..155
FT	Protein	/label= light_chain
FT	Peptide	156..157
FT	Protein	/label= Lys_Arg_dipeptide
FT	Peptide	158..419
FT	Protein	/label= Heavy_chain
FT	Peptide	158..169
FT	Protein	/label= Activation_peptide
FT	Misc-difference 309	
FT	Misc-difference 311	/note= "Wild-type Glu substituted by Asn"
FT	Misc-difference 311	/note= "Wild-type Lys substituted by Thr"
XX		
PN	WO200232461-A2.	
XX		
PD	25-Apr-2002.	
XX		

PF	15-OCT-2001; 2001WO-DK000679.	
XX		
PR	18-OCT-2000; 2000DK-00001560.	
PR	18-OCT-2000; 2000US-0242268P.	
PR	21-JUN-2001; 2001DK-00009970.	
PR	21-JUN-2001; 2001US-0300154P.	
XX		
PA	(MAXY-) MAXYGEN APS.	
PA	(MAXY-) MAXYGEN HOLDINGS LTD.	
XX		
PI	Andersen XV; Pedersen AH; Freskgaard PO;	
XX		
DR	WPI; 2002-489675/52.	
XX		
PT	Novel conjugate useful for treating or preventing septic shock, stroke	
PT	and myocardial infarction, comprises non-polypeptide group covalently	
PT	attached to protein C polypeptide comprising an attachment group.	
XX		
PS	Claim 9; Page; 92pp; English.	
XX		
CC	The invention relates to a conjugate (I) comprising at least one non-	
CC	polypeptide moiety (II) (e.g. an N-glycosyl group) covalently attached to	
CC	a protein C polypeptide comprising an amino acid sequence which differs	
CC	from that of a parent protein C polypeptide (III) in at least one	
CC	introduced and/or at least one removed amino acid residue comprising an	
CC	attachment group for the non-polypeptide group (e.g. an N-glycosylation	
CC	site). Also included are (1) a variant (IV) of (III) comprising a	
CC	substitution in a position (P) where (P) is an amino acid with at least	
CC	25% of its side group exposed to the surface, with the proviso that the	
CC	substitution is not Thr245Ser/Ala/His/Lys/Arg/Asn/Asp/Glu/Gly/Gln,	
CC	Lys302Ser/Ala/His/Lys/Arg/Asn/Asp/Glu/Gly/Gln or Phe158Ser/Ala/Thr/	
CC	His/Lys/Arg/Asn/Asp/Glu/Gly/Gln; (2) a nucleotide sequence (V) encoding	
CC	(IV); (3) an expression vector (VI) comprising (V); (4) a host cell (VII)	
CC	comprising (V) or (VI); (5) increasing (M2) the functional in vivo half-	
CC	life of the serum half-life of a parent protein C polypeptide. The	
CC	conjugates, variants and protein C proteins are useful as medicaments,	
CC	and in the manufacture of medicaments for the treatment (and	
CC	diagnosis/prevention) of stroke, myocardial infarction, after venous	
CC	thrombosis, disseminated intravascular coagulation (DIC), sepsis, septic	
CC	shock, emboli e.g. pulmonary emboli, transplantation such as bone marrow	
CC	transplantation, burns, pregnancy, major surgery/trauma or adult	
CC	respiratory distress syndrome (ARDS). The variant protein C has an	
CC	increased resistance to activation by e.g. human plasma and alpha-1	
CC	antitrypsin. The conjugates have an increased in vivo half-life,	
CC	increased serum half-life, increased resistance to inhibitors, reduced	
CC	renal clearance, reduced immunogenicity and/or increased bioavailability.	
CC	The conjugate offers a number of advantages over the currently available	
CC	APC products, including longer duration between injections,	
CC	administration of less protein, and fewer side effects. Moreover, a	
CC	reduced anticoagulant activity is beneficial to reduce the risk of	
CC	bleeding while maintaining the antiinflammatory activity of APC	
CC	(activated protein C) conjugates. This must be especially important when	
CC	the conjugate has an extended plasma life. The gene for protein C is	
CC	located on chromosome 2q13-q14. The present sequence represents a	
CC	protein C variant of the invention. Note: The present sequence is not	
CC	shown in the specification but was created by the indexer using the	
CC	protein C sequence appearing as AU990602 and the information in claim 9	
XX		
SQ	Sequence 419 AA;	
Query Match	99.5%; Score 2313; DB 5; Length 419;	
Best Local Similarity	99.5%; Pred. No. 1,66-142;	
Matches 417; Conservative	0; Mismatches 2; Indels 0; Gaps 0;	
QY	1 ANSFLEELRHSSLEKCEIEICDPEEAKETIQVNDDTLAFWSKVYDQGLVPLEHPCA 60	
DB	1 ANSFLEELRHSSLEKCEIEICDPEEAKETIQVNDDTLAFWSKVYDQGLVPLEHPCA 60	
QY	61 SLCCGHTCIDIGISGFCDCRSGEGRFCQREVSFLNCSLDNGGCTHYCLEEVRRCSC 120	
DB	61 SLCCGHTCIDIGISGFCDCRSGEGRFCQREVSFLNCSLDNGGCTHYCLEEVRRCSC 120	
QY	121 ARGYLGDLDLQCHPAVYKPCGRPWKMEKKRSHLKRPTDEQVDPRLDGKMTREGD 160	
DB	121 ARGYLGDLDLQCHPAVYKPCGRPWKMEKKRSHLKRPTDEQVDPRLDGKMTREGD 160	

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Db 121 APGYKGDLLQCHPAVKPCGRPKMEKRSKSLKDTDEDDQVDRLLDGGKTRRGD 180
Qy 181 SPQGVLLDSKKKLAAGAVLIHPSPVLTAAHOMBSKLLVRLGEYDARRKWEELDDI 240
Db 181 SPQGVLLDSKKKLAAGAVLIHPSPVLTAAHOMBSKLLVRLGEYDARRKWEELDDI 240
Qy 241 KEVFAHPNYSKSTTNDIALHLAQPATLSQTVPICLPDSGLAERLNQAGETLVYGM 300
Db 241 KEVFAHPNYSKSTTNDIALHLAQPATLSQTVPICLPDSGLAERLNQAGETLVYGM 300
Qy 301 GHSSREKAKRNEFPVLFKIPVPHNECSEWMSNMVSENNLCAGILGRDQACBDS 360
Db 301 GHSSREKAKRNEFPVLFKIPVPHNECSEWMSNMVSENNLCAGILGRDQACBDS 360
Qy 361 GGPVVASFHGTWFLVGLVSWGECGLMNYGYTKVSRITDTHGHTDKEAPQKSWAP 419
Db 361 GGPVVASFHGTWFLVGLVSWGECGLMNYGYTKVSRITDTHGHTDKEAPQKSWAP 419

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RESULT 94

AAU99056

ID AAU99056 standard; protein; 419 AA.

AC AAU99056;

XX 23-AUG-2002 (first entry)

DE Human Protein C zymogen protein mutant B307N/B309T.

XX Human; Protein C; N-glycosylation; APC; activated protein C; zymogen;
 KM serum half-life; chromosome 2q13-q14; stroke; myocardial infarction;
 KM after venous thrombosis; disseminated intravascular coagulation; DIC;
 KM sepsis; septic shock; embolism; pulmonary embolism; burn; pregnancy;
 KM bone marrow transplantation; major surgery; trauma; ARDS; coagulant;
 KM adult respiratory distress syndrome; alpha-1 antitrypsin; mutant; mutein.

XX Homo sapiens.

XX Synthetic.

FH Key Location/Qualifiers

FT Protein 1..155

FT Peptide /label= Light_chain

FT Protein /label= Lys_Arg_dipeptide

FT Peptide /label= Heavy_chain

FT Peptide /label= 158..169

FT Misc-difference /label= Activation_peptide

FT Misc-difference /note= "Wild-type Glu substituted by Asn"

FT Misc-difference /note= "Wild-type Glu substituted by Thr"

FT Misc-difference /note= "Wild-type Glu substituted by Thr"

FT Misc-difference /note= "Wild-type Glu substituted by Thr"

FT Misc-difference /note= "Wild-type Glu substituted by Thr"

FT Misc-difference /note= "Wild-type Glu substituted by Thr"

FT Misc-difference /note= "Wild-type Glu substituted by Thr"

FT Misc-difference /note= "Wild-type Glu substituted by Thr"

FT Misc-difference /note= "Wild-type Glu substituted by Thr"

FT Misc-difference /note= "Wild-type Glu substituted by Thr"

FT Misc-difference /note= "Wild-type Glu substituted by Thr"

FT Misc-difference /note= "Wild-type Glu substituted by Thr"

FT Misc-difference /note= "Wild-type Glu substituted by Thr"

FT Misc-difference /note= "Wild-type Glu substituted by Thr"

FT Misc-difference /note= "Wild-type Glu substituted by Thr"

FT Misc-difference /note= "Wild-type Glu substituted by Thr"

FT Misc-difference /note= "Wild-type Glu substituted by Thr"

FT Misc-difference /note= "Wild-type Glu substituted by Thr"

FT Misc-difference /note= "Wild-type Glu substituted by Thr"

FT Misc-difference /note= "Wild-type Glu substituted by Thr"

FT Misc-difference /note= "Wild-type Glu substituted by Thr"

FT Misc-difference /note= "Wild-type Glu substituted by Thr"

FT Misc-difference /note= "Wild-type Glu substituted by Thr"

FT Misc-difference /note= "Wild-type Glu substituted by Thr"

FT Misc-difference /note= "Wild-type Glu substituted by Thr"

FT Misc-difference /note= "Wild-type Glu substituted by Thr"

FT Misc-difference /note= "Wild-type Glu substituted by Thr"

PT and myocardial infarction, comprises non-polypeptide group covalently
 PT attached to protein C polypeptide comprising an attachment group.
 PS Claim 9; Page: 92pp; English.

CC The invention relates to a conjugate (I) comprising at least one non-
 CC polypeptide moiety (II) (e.g. an N-glycosyl group) covalently attached to
 CC a protein C polypeptide comprising an amino acid sequence which differs
 CC from that of a parent protein C polypeptide (III) in at least one
 CC introduced and/or at least one removed amino acid residue comprising an
 CC attachment group for the non-polypeptide group (e.g. an N-glycosylation
 CC site). Also included are (1) a variant (IV) of (III) comprising a
 CC substitution in a position (P) where (P) is an amino acid with at least
 CC 25% of its side group exposed to the surface, with the proviso that the
 CC substitution is not Thr245Ser/Ala/Thr/His/Lys/Arg/Asn/Asp/Glu/Gly/Gln,
 CC Tyr302Ser/Ala/Thr/His/Lys/Arg/Asn/Asp/Glu/Gly/Gln or Phe316Ser/Ala/Thr/
 CC His/Lys/Arg/Asn/Asp/Glu/Gly/Gln; (2) a nucleotide sequence (V) encoding
 CC (IV); (3) an expression vector (VI) comprising (V); (4) a host cell (VII)
 CC comprising (V) or (VI); (5) increasing (W2) the functional in vivo half-
 CC life or the serum half-life of a parent protein C polypeptide. The
 CC conjugates, variants and protein C proteins are useful as medicaments,
 CC and in the manufacture of medicaments for the treatment (and
 CC diagnosis/prevention) of stroke, myocardial infarction, after venous
 CC thrombosis, disseminated intravascular coagulation (DIC), sepsis, septic
 CC shock, emboli e.g. pulmonary emboli, transplantation such as bone marrow
 CC transplantation, burns, pregnancy, major surgery/trauma or adult
 CC respiratory distress syndrome (ARDS). The variant protein C has an
 CC increased resistance to activation by e.g. human plasma and alpha-1
 CC antitrypsin. The conjugates have an increased in vivo half-life,
 CC increased serum half-life, increased resistance to inhibitors, reduced
 CC renal clearance, reduced immunogenicity and/or increased bioavailability.
 CC The conjugate offers a number of advantages over the currently available
 CC APC products, including longer duration between injections,
 CC administration of less protein, and fewer side effects. Moreover, a
 CC reduced anticoagulant activity is beneficial to reduce the risk of
 CC bleeding while maintaining the antiinflammatory activity of APC
 CC (activated protein C) conjugates. This must be especially important when
 CC the conjugate has an extended plasma life. The gene for protein C is
 CC located on chromosome 2q13-q14. The present sequence represents a zymogen
 CC protein C variant of the invention. Note: The present sequence is not
 CC shown in the specification but was created by the indexer using the
 CC protein C sequence appearing as AAU99002 and the information in claim 9

SQ Sequence 419 AA;

Query Match 99.5%; Score 2313; DB 5; Length 419;

Best Local Similarity 99.5%; Pred. No. 1.6e-142; Matches 417; Conservative 0; Mismatches 2; Indels 0; Gaps 0;

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Qy 1 ANSPFEEIRSSIERCTBEICDPEEAKETPQVVDITLAFMSKIVDQDQIVLPLEHCA 60
Db 1 ANSPFEEIRSSIERCTBEICDPEEAKETPQVVDITLAFMSKIVDQDQIVLPLEHCA 60
Qy 61 SLCCGHTCIDIGISFSDCRSGWEGRFCQREVSPLNCSLDNGCTHYCLEEVGRRRSC 120
Db 61 SLCCGHTCIDIGISFSDCRSGWEGRFCQREVSPLNCSLDNGCTHYCLEEVGRRRSC 120
Qy 121 ARGYLGDLLQCHPAVKPCGRPKMEKRSKSLKDTDEDDQVDRLLDGGKTRRGD 180
Db 121 ARGYLGDLLQCHPAVKPCGRPKMEKRSKSLKDTDEDDQVDRLLDGGKTRRGD 180
Qy 181 SPQGVLLDSKKKLAAGAVLIHPSPVLTAAHOMBSKLLVRLGEYDARRKWEELDDI 240
Db 181 SPQGVLLDSKKKLAAGAVLIHPSPVLTAAHOMBSKLLVRLGEYDARRKWEELDDI 240
Qy 241 KEVFAHPNYSKSTTNDIALHLAQPATLSQTVPICLPDSGLAERLNQAGETLVYGM 300
Db 241 KEVFAHPNYSKSTTNDIALHLAQPATLSQTVPICLPDSGLAERLNQAGETLVYGM 300
Qy 301 GHSSREKAKRNEFPVLFKIPVPHNECSEWMSNMVSENNLCAGILGRDQACBDS 360
Db 301 GHSSREKAKRNEFPVLFKIPVPHNECSEWMSNMVSENNLCAGILGRDQACBDS 360

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QY 361 GSPWVASFHGTWFLVGLVSMGEGCGLLHNTGYVTKVSRYLDMIGHIRUKEAPQKSNAP 419
 DB 361 GSPWVASFHGTWFLVGLVSMGEGCGLLHNTGYVTKVSRYLDMIGHIRUKEAPQKSNAP 419

RESULT 95
 AAU99085
 ID AAU99085 standard; protein; 419 AA.
 AC AAU99085;
 XX
 DT 23-AUG-2002 (first entry)
 DE Human Protein C zymogen protein mutant E357N/D359S.

XX Human: Protein C; N-glycosylation; APC: activated protein C; zymogen;
 XX serum half-life; chromosome 2q13-q14; stroke; myocardial infarction;
 KW after venous thrombosis; disseminated intravascular coagulation; DIC;
 KW sepsis; septic shock; embolism; pulmonary embolism; burn; pregnancy;
 KW bone marrow transplantation; major surgery; trauma; ARDS; coagulant;
 KW adult respiratory distress syndrome; alpha-1 antitrypsin; mutant; mutein.

XX Homo sapiens.
 OS Synthetic.
 XX
 FH Key Location/Qualifiers
 FT Protein 1..155
 FT /label= Light_chain
 FT Peptide 156..157
 FT /label= Lys_Arg_dipeptide
 FT Protein 158..419
 FT /label= Heavy_chain
 FT Peptide 158..169
 FT /label= Activation_peptide
 FT Misc-difference 357
 FT /note= "Wild-type Glu substituted by Asn"
 FT Misc-difference 359
 FT /note= "Wild-type Asp substituted by Ser"

XX WO200232461-A2.
 PN 25-APR-2002.
 PD 15-OCT-2001; 2001WO-DK000679.
 XX
 PF 18-OCT-2000; 2000DK-00001560.
 PR 18-OCT-2000; 2000US-0242268P.
 PR 21-JUN-2001; 2001DK-00000970.
 PR 21-JUN-2001; 2001US-0300154P.
 XX
 FA (MAXY-) MAXYGEN APS.
 PA (MAXY-) MAXYGEN HOLDINGS LTD.
 PI Andersen KV, Pedersen AH, Freskgaard PO;
 XX
 DR WPI; 2002-489875/52.
 XX
 PT Novel conjugate useful for treating or preventing septic shock, stroke
 PT and myocardial infarction, comprises non-polypeptide group covalently
 PT attached to protein C polypeptide comprising an attachment group.
 XX
 PS Claim 9; Page; 92pp; English.

XX The invention relates to a conjugate (I) comprising at least one non-
 CC polypeptide moiety (II) (e.g. an N-glycosyl group) covalently attached to
 CC a protein C polypeptide comprising an amino acid sequence which differs
 CC from that of a parent protein C polypeptide (III) in at least one
 CC introduced and/or at least one removed amino acid residue comprising an
 CC attachment group for the non-polypeptide group (e.g. an N-glycosylation
 CC site). Also included are (1) a variant (IV) of (III) comprising a
 CC substitution in a position (P) where (P) is an amino acid with at least
 CC 25% of its side group exposed to the surface, with the proviso that the
 CC substitution is not Thr245Ser/Ala/His/Lys/Arg/Asn/Asp/Glu/Gly/Gln,

CC Tyr302Ser/Ala/Thr/His/Lys/Arg/Asn/Asp/Glu/Gly/Gln or Phe316Ser/Ala/Thr/
 CC His/Lys/Arg/Asn/Asp/Glu/Gly/Gln; (2) a nucleotide sequence (V) encoding
 CC (IV); (3) an expression vector (VI) comprising (V); (4) a host cell (VII)
 CC comprising (V) or (VI); (5) increasing (W2) the functional in vivo half-
 CC life of the serum half-life of a parent protein C polypeptide. The
 CC conjugates, variants and protein C proteins are useful as medicaments,
 CC and in the manufacture of medicaments for the treatment (and
 CC diagnosis/prevention) of stroke, myocardial infarction, after venous
 CC thrombosis, disseminated intravascular coagulation (DIC), sepsis, septic
 CC shock, emboli e.g. pulmonary emboli, transplantation such as bone marrow
 CC transplantation, burns, pregnancy, major surgery/trauma or adult
 CC respiratory distress syndrome (ARDS). The variant protein C has an
 CC increased resistance to activation by e.g. human plasma and alpha-1
 CC antitrypsin. The conjugates have an increased in vivo half-life.
 CC increased serum half-life, increased resistance to inhibitors, reduced
 CC renal clearance, reduced immunogenicity and/or increased bioavailability.
 CC The conjugate offers a number of advantages over the currently available
 CC APC products, including longer duration between injections,
 CC administration of less protein, and fewer side effects. Moreover, a
 CC reduced anticoagulant activity is beneficial to reduce the risk of
 CC bleeding while maintaining the anti-inflammatory activity of APC
 CC (activated protein C) conjugates. This must be especially important when
 CC the conjugate has an extended plasma life. The gene for protein C is
 CC located on chromosome 2q13-q14. The present sequence represents a zymogen
 CC protein C variant of the invention. Note: The present sequence is not
 CC shown in the specification but was created by the indexer using the
 CC protein C sequence appearing as AAU99002 and the information in claim 9

XX
 SQ Sequence 419 AA;
 Query Match 99.5%; Score 2113; DB 5; Length 419;
 Best Local Similarity 99.5%; Pred. No. 1.6e-142;
 Matches 417; Conservative 0; Mismatches 2; Indels 0; Gaps 0;

QY 1 ANSFLELRHSLSRECEIEICDFEAEKIFQNVDDTLAFKSHVDQCLVPLRHPA 60
 DB 1 ANSFLELRHSLSRECEIEICDFEAEKIFQNVDDTLAFKSHVDQCLVPLRHPA 60
 QY 61 SLCCGHGTCIDGIGSPFCDCRSGWGRFCQREVSFVNCGLDNGGCTYCLIEVWRRCSG 120
 DB 61 SLCCGHGTCIDGIGSPFCDCRSGWGRFCQREVSFVNCGLDNGGCTYCLIEVWRRCSG 120
 QY 121 APGYKLGDLLQCHPAVKEPCGRPWMEKRSKSLRDEDEQDQVDRLLDSKMTRRGD 180
 DB 121 APGYKLGDLLQCHPAVKEPCGRPWMEKRSKSLRDEDEQDQVDRLLDSKMTRRGD 180
 QY 181 SPQVVLDSKSKKLACGAVLIHPSWVLAARQWDESKLLVLSGYDRMRWKEGLDLDI 240
 DB 181 SPQVVLDSKSKKLACGAVLIHPSWVLAARQWDESKLLVLSGYDRMRWKEGLDLDI 240
 QY 241 KEVFVHPNYSKSTTDNDIALHLAQPATLSQTIVPICLPDSGLARELNQAGQETLVYGM 300
 DB 241 KEVFVHPNYSKSTTDNDIALHLAQPATLSQTIVPICLPDSGLARELNQAGQETLVYGM 300
 QY 301 GHSSREKAKRNTFTVLANFKIPVVPNRCSEVMSNMVSENNLCAGILDRDADACGSS 360
 DB 301 GHSSREKAKRNTFTVLANFKIPVVPNRCSEVMSNMVSENNLCAGILDRDADACGSS 360
 QY 361 GSPWVASFHGTWFLVGLVSMGEGCGLLHNTGYVTKVSRYLDMIGHIRUKEAPQKSNAP 419
 DB 361 GSPWVASFHGTWFLVGLVSMGEGCGLLHNTGYVTKVSRYLDMIGHIRUKEAPQKSNAP 419

RESULT 96
 AAU99044
 ID AAU99044 standard; protein; 419 AA.
 AC AAU99044;
 XX
 DT 23-AUG-2002 (first entry)
 DE Human Protein C zymogen protein mutant L296N/7298S.

KM Human; Protein C; N-glycosylation; APC; activated protein C; zymogen;
 KM serum half-life; chromosome 2q13-q14; stroke; myocardial infarction;
 KM after venous thrombosis; disseminated intravascular coagulation; DIC;
 KM sepsis; septic shock; embolism; pulmonary embolism; burn; pregnancy;
 KM bone marrow transplantation; major surgery; trauma; ARDS; coagulant;
 KM adult respiratory distress syndrome; alpha-1 antitrypsin; mutant; mutein.
 XX Homo sapiens.
 OS Synthetic.
 XX
 FH Key
 FT Location/Qualifiers
 FT 1..155
 FT /label= Light_chain
 FT Peptide
 FT 156..157
 FT /label= Lys_Arg_dipeptide
 FT Protein
 FT 158..419
 FT /label= Heavy_chain
 FT Peptide
 FT 159..169
 FT /label= Activation_peptide
 FT Misc-difference 257
 FT /note= "Wild-type Thr substituted by Ser"
 FT Misc-difference 296
 FT /note= "Wild-type Leu substituted by Asn"
 FT
 FT WC200232461-A2.
 PN 25-APR-2002.
 PD 15-OCT-2001; 2001WO-DK000679.
 XX 18-OCT-2000; 2000DK-00001560.
 XX 18-OCT-2000; 2000US-0242268P.
 PR 21-JUN-2001; 2001DK-00000970.
 PR 21-JUN-2001; 2001US-0300154P.
 XX
 PA (MAXY-) MAXYGEN APS.
 PA (MAXY-) MAXYGEN HOLDINGS LTD.
 PA
 PI Andersen KV, Pedersen AH, Freshgard PO;
 XX WPI; 2002-489875/52.
 DR
 XX Novel conjugate useful for treating or preventing septic shock, stroke
 PT and myocardial infarction, comprises non-polypeptide group covalently
 PT attached to protein C polypeptide comprising an attachment group.
 XX
 XX Claim 9; Page: 92pp; English.
 XX
 CC The invention relates to a conjugate (I) comprising at least one non-
 CC polypeptide moiety (II) (e.g. an N-glycosyl group) covalently attached to
 CC a protein C polypeptide comprising an amino acid sequence which differs
 CC from that of a parent protein C polypeptide (III) in at least one
 CC introduced and/or at least one removed amino acid residue comprising an
 CC attachment group for the non-polypeptide group (e.g. an N-glycosylation
 CC site). Also included are (1) a variant (IV) of (III) comprising a
 CC substitution in a position (p) where (p) is an amino acid with at least
 CC 25% of its side group exposed to the surface, with the proviso that the
 CC substitution is not Thr245Ser/Ala/His/Lys/Arg/Asn/Asp/Glu/Gly/Gln
 CC Tyr332Ser/Ala/Thr/His/Lys/Arg/Asn/Asp/Glu/Gly/Gln or Phe316Ser/Ala/Thr/
 CC His/Lys/Arg/Asn/Asp/Glu/Gly/Gln; (2) a nucleotide sequence (V) encoding
 CC (IV); (3) an expression vector (VI) comprising (V); (4) a host cell (VII)
 CC comprising (V) or (VI); (5) increasing (M2) the functional in vivo half-
 CC life or the serum half-life of a parent protein C polypeptide. The
 CC conjugates, variants and protein C proteins are useful as medicaments,
 CC and in the manufacture of medicaments for the treatment (and
 CC diagnosis/prevention) of stroke, myocardial infarction, after venous
 CC thrombosis, disseminated intravascular coagulation (DIC), sepsis, septic
 CC shock, emboli e.g. pulmonary emboli, transplantation such as bone marrow
 CC transplantation, burns, pregnancy, major surgery/trauma or adult
 CC respiratory distress syndrome (ARDS). The variant protein C has an
 CC increased resistance to activation by e.g. human plasma and alpha-1
 CC antitrypsin. The conjugates have an increased in vivo half-life,
 CC increased serum half-life, increased resistant to inhibitors, reduced

CC renal clearance, reduced immunogenicity and/or increased bioavailability.
 CC The conjugate offers a number of advantages over the currently available
 CC APC products, including longer duration between injections.
 CC administration of less protein, and fewer side effects. Moreover, a
 CC reduced anticoagulant activity is beneficial to reduce the risk of
 CC bleeding while maintaining the antiinflammatory activity of APC
 CC (activated protein C) conjugates. This must be especially important when
 CC the conjugate has an extended plasma life. The gene for protein C is
 CC located on chromosome 2q13-q14. The present sequence represents a zymogen
 CC protein C variant of the invention. Note: The present sequence is not
 CC shown in the specification but was created by the indexer using the
 CC protein C sequence appearing as A099002 and the information in claim 9
 XX
 SQ Sequence 419 AA;
 Query Match 99.5%; Score 2313; DB 5; Length 419;
 Best Local Similarity 99.5%; Pred. No. 1.6e-142;
 Matches 417; Conservative 1; Mismatches 1; Indels 0; Gaps 0;
 QY 1 ANSFLELRHSLSRECEIEICDFEAKETFOVNDTLAFMSKRVGDQCVLPLEHCA 60
 DB 1 ANSFLELRHSLSRECEIEICDFEAKETFOVNDTLAFMSKRVGDQCVLPLEHCA 60
 QY 61 SLCCGHTCTDGIQSFCDCRSWEGHFCQREYVFLNCSLDNGCTHYCLEEYGNRCSC 120
 DB 61 SLCCGHTCTDGIQSFCDCRSWEGHFCQREYVFLNCSLDNGCTHYCLEEYGNRCSC 120
 QY 121 APGYLGDLDLQCHPAVKFPCGRPWKMEKRSKLRDTEDEQDVPRLLDKKTRRGD 180
 DB 121 APGYLGDLDLQCHPAVKFPCGRPWKMEKRSKLRDTEDEQDVPRLLDKKTRRGD 180
 QY 181 SEMQVVLDSKKLACGAVLHPISWLTAAHCWDSKKLRLGLEVDLRWKEVELDLDI 240
 DB 181 SEMQVVLDSKKLACGAVLHPISWLTAAHCWDSKKLRLGLEVDLRWKEVELDLDI 240
 QY 241 KEVFPHPVYSKSTTDNDIALHLAQPATLSQTVIPICLPDSGLARELNAGQETLVYTW 300
 DB 241 KEVFPHPVYSKSTTDNDIALHLAQPATLSQTVIPICLPDSGLARELNAGQETLVYTW 300
 QY 301 GHSSREKEAKRNTVYVNFITKIPVPHNCSFWMSNYSNNICAGILGDQDACESDS 360
 DB 301 GHSSREKEAKRNTVYVNFITKIPVPHNCSFWMSNYSNNICAGILGDQDACESDS 360
 QY 361 GGPVVASFPGTWPLVGLVMSGEGCLAHNYGYTKYSRLDPMIGHLRDKEAPQKSNAP 419
 DB 361 GGPVVASFPGTWPLVGLVMSGEGCLAHNYGYTKYSRLDPMIGHLRDKEAPQKSNAP 419
 RESULT 97
 AAU99054
 ID AAU99054 standard; protein; 419 AA.
 AC AAU99054;
 DT 23-AUG-2002 (first entry)
 XX
 XX Human Protein C zymogen protein mutant R306N/K308T.
 KM Human; Protein C; N-glycosylation; APC; activated protein C; zymogen;
 KM serum half-life; chromosome 2q13-q14; stroke; myocardial infarction;
 KM after venous thrombosis; disseminated intravascular coagulation; DIC;
 KM sepsis; septic shock; embolism; pulmonary embolism; burn; pregnancy;
 KM bone marrow transplantation; major surgery; trauma; ARDS; coagulant;
 KM adult respiratory distress syndrome; alpha-1 antitrypsin; mutant; mutein.
 XX Homo sapiens.
 OS Synthetic.
 XX
 FH Key
 FT Location/Qualifiers
 FT 1..155
 FT /label= Light_chain
 FT Peptide
 FT 156..157
 FT /label= Lys_Arg_dipeptide

Query Match	99.5%	Score 2313	DB 5	Length 419		
Best Local Similarity	99.5%	Pred. No. 1.6e-142				
Matches	417	Conservative	0	Mismatches 2		
			Indels	Gaps		
			0	0		
QY	1	ANSFLEELRHSSLEBRCIEBEI	CDFEFAKEI	PQNVDDTLA	FWMSRNVHDGQCLVLPLEHPCA	60
Db	1	ANSFLEELRHSSLEBRCIEBEI	CDFEFAKEI	PQNVDDTLA	FWMSRNVHDGQCLVLPLEHPCA	60
QY	61	SLCCGHCCTIDGSGSCDCC	SGWEGR	PCOR	EVUSPLNSCLNGGCTHYCLAEVGRSC	120
Db	61	SLCCGHCCTIDGSGSCDCC	SGWEGR	PCOR	EVUSPLNSCLNGGCTHYCLAEVGRSC	120
QY	121	APGYKLGDDLLQCHPAVKE	PCGGR	PMKXMEKRS	SHLKRDTDEQDQVDPRLIDGKATRRGD	180
Db	121	APGYKLGDDLLQCHPAVKE	PCGGR	PMKXMEKRS	SHLKRDTDEQDQVDPRLIDGKATRRGD	180
QY	181	SPWQVLLDSKKKLAGAVL	HPBSVLTAAH	CMDSKKLLVRLGEYDL	LRWKEMLDIT	240
Db	181	SPWQVLLDSKKKLAGAVL	HPBSVLTAAH	CMDSKKLLVRLGEYDL	LRWKEMLDIT	240
QY	241	KEVFAHPNYSSTINDID	MLHLAQ	PRTL	SGQTVF	300
Db	241	KEVFAHPNYSSTINDID	MLHLAQ	PRTL	SGQTVF	300
QY	301	GYSHSSEKAKRNETFVLF	FKI	PVYPHNCS	FWMSNNVSNMLCAGILIGDRQDACGDS	360
Db	301	GYSHSSEKAKRNETFVLF	FKI	PVYPHNCS	FWMSNNVSNMLCAGILIGDRQDACGDS	360
QY	361	GGPMVASSTHGWPVLVGL	VMGSGGCL	LHNYGYTVYS	VLDMTHGHRDKEAPQKSNAP	419
Db	361	GGPMVASSTHGWPVLVGL	VMGSGGCL	LHNYGYTVYS	VLDMTHGHRDKEAPQKSNAP	419

PR 18-OCT-2000; 2000DK-00001560.
 PR 18-OCT-2000; 2000US-0242268P.
 PR 21-JUN-2001; 2001DK-00000970.
 PR 21-JUN-2001; 2001US-0300154P.
 XX
 PA (MAXY-) MAXYGEN APS.
 PA (MAXY-) MAXYGEN HOLDINGS LTD.
 PI Andersen KV, Pedersen AH, Friesgaard PO;
 DR WPI, 2002-489875/52.
 XX
 PT Novel conjugate useful for treating or preventing septic shock, stroke
 PT and myocardial infarction, comprises non-polypeptide group covalently
 XX attached to protein C polypeptide comprising an attachment group.
 PS Claim 9; Page; 92pp; English.

CC The invention relates to a conjugate (I) comprising at least one non-
 CC polypeptide moiety (II) (e.g. an N-glycosyl group) covalently attached to
 CC a protein C polypeptide comprising an amino acid sequence which differs
 CC from that of a parent protein C polypeptide (III) in at least one
 CC introduced and/or at least one removed amino acid residue comprising an
 CC attachment group for the non-polypeptide group (e.g. an N-glycosylation
 CC site). Also included are (1) a variant (IV) of (III) comprising a
 CC substitution in a position (P) where (P) is an amino acid with at least
 CC 25% of its side group exposed to the surface, with the proviso that the
 CC substitution is not Thr245Ser/Ala/His/Lys/Arg/Asn/Asp/Glu/Gln.
 CC Tyr302Ser/Ala/Thr/His/Lys/Arg/Asn/Asp/Glu/Gln or Phe316Ser/Ala/Thr/
 CC His/Lys/Arg/Asn/Asp/Glu/Gln; (2) a nucleotide sequence (V) encoding
 CC (IV); (3) an expression vector (VI) comprising (V); (4) a host cell (VII)
 CC comprising (V) or (VI); (5) increasing (M2) the functional in vivo half-
 CC life of the serum half-life of a parent protein C polypeptide. The
 CC conjugates, variants and protein C proteins are useful as medicaments,
 CC and in the manufacture of medicaments for the treatment (and
 CC diagnosis/prevention) of stroke, myocardial infarction, after-venous
 CC thrombosis, disseminated intravascular coagulation (DIC), sepsis, septic
 CC shock, emboli e.g. pulmonary emboli, transplantation such as bone marrow
 CC transplantation, burns, pregnancy, major surgery/trauma or adult
 CC respiratory distress syndrome (ARDS). The variant protein C has an
 CC increased resistance to activation by e.g. human plasma and alpha-1
 CC antitrypsin. The conjugates have an increased in vivo half-life,
 CC increased serum half-life, increased resistance to inhibitors, reduced
 CC renal clearance, reduced immunogenicity and/or increased bioavailability.
 CC The conjugate offers a number of advantages over the currently available
 CC APC products, including longer duration between injections,
 CC administration of less protein, and fewer side effects. Moreover, a
 CC reduced anticoagulant activity is beneficial to reduce the risk of
 CC bleeding while maintaining the anti-inflammatory activity of APC
 CC (activated protein C) conjugates. This must be especially important when
 CC the conjugate has an extended plasma life. The gene for protein C is
 CC located on chromosome 2q13-q14. The present sequence represents a zymogen
 CC protein C variant of the invention. Note: The present sequence is not
 CC shown in the specification but was created by the indexer using the
 CC protein C sequence appearing as AAU99002 and the information in claim 9
 CC
 XX
 SQ Sequence 419 AA;

Query Match 99.5%; Score 23.3; DB 5; Length 419;
 Best Local Similarity 99.5%; Pred. No. 1.6e-14;
 Matches 417; Conservative 0; Mismatches 2; Indels 0; Gaps 0;
 QY 1 ANSFLEELRHSLSERECIEEICDFEAKELFQNVDDTLAFWSKRVAGDQCLVLEAPCA 60
 DB 1 ANSFLEELRHSLSERECIEEICDFEAKELFQNVDDTLAFWSKRVAGDQCLVLEAPCA 60
 QY 61 SLCCGAGTCIDGIGSFCDCRSWEGRFQCRVSTLANSIDNGGCTHYCLEVWRRGSC 120
 DB 61 SLCCGAGTCIDGIGSFCDCRSWEGRFQCRVSTLANSIDNGGCTHYCLEVWRRGSC 120
 QY 121 APGYKGLDILLQCPAVKPCGRPMKMEKSKSHKRTPEHDEQVDPDLIDGMKTRRG 180
 DB 121 APGYKGLDILLQCPAVKPCGRPMKMEKSKSHKRTPEHDEQVDPDLIDGMKTRRG 180

QY 181 SPQWVTLIDSKKKAAGAVLIHPSWVLTAAHONDESKKTLVRFGEYDLRRMEKVELDI 240
 DB 181 SPQWVTLIDSKKKAAGAVLIHPSWVLTAAHONDESKKTLVRFGEYDLRRMEKVELDI 240
 QY 241 KEVFNHNSKSTTDDIALHLAQPATLSQTLVPCIDPSGLAERELNQAQETLVYTW 300
 DB 241 KEVFNHNSKSTTDDIALHLAQPATLSQTLVPCIDPSGLAERELNQAQETLVYTW 300
 QY 301 GYHSREKEAKRRRTFTVNFITKIPVPHNECSFVSNMNSBNMLCAGILGRQDACE 360
 DB 301 GYHSREKEAKRRRTFTVNFITKIPVPHNECSFVSNMNSBNMLCAGILGRQDACE 360
 QY 361 GSPWVASPHGTWPLVGLVSWGSGGLLHNYGYTTSRYLDMWIGHIRPKXAPOKSNAP 419
 DB 361 GSPWVASPHGTWPLVGLVSWGSGGLLHNYGYTTSRYLDMWIGHIRPKXAPOKSNAP 419

RESULT 99
 AAU99028
 ID AAU99028 standard; protein; 419 AA.
 AC AAU99028;
 DT 23-AUG-2002 (first entry)
 XX
 DE Human Protein C zymogen protein mutant V243N/V245T.
 KW Human; Protein C; N-glycosylation; APC; activated protein C; zymogen;
 KW serum half-life; chromosome 2q13-q14; stroke; myocardial infarction;
 KW after venous thrombosis; disseminated intravascular coagulation; DIC;
 KW sepsis; septic shock; embolism; pulmonary embolism; burn; pregnancy;
 KW bone marrow transplantation; major surgery; trauma; ARDS; coagulant;
 KW adult respiratory distress syndrome; alpha-1 antitrypsin; mutant; mutein.
 XX
 OS Homo sapiens.
 OS Synthetic.
 XX
 FH Key Location/Qualifiers
 FT Protein 1..155
 FT Peptide /label= Light_chain
 FT /label= Lys_Arg_dipeptide
 FT Protein 156..419
 FT /label= Heavy_chain
 FT Peptide 158..169
 FT /label= Activation_peptide
 FT Misc-difference 243
 FT /note= "Wild-type Val substituted by Asn"
 FT FT Misc-difference 245
 FT /note= "Wild-type Val substituted by Thr"
 PN WC000232461-A2.
 PD 25-APR-2002.
 XX
 PF 15-OCT-2001; 2001WO-000672.
 XX
 PR 18-OCT-2000; 2000DK-00001560.
 PR 18-OCT-2000; 2000US-0242268P.
 PR 21-JUN-2001; 2001DK-00000970.
 PR 21-JUN-2001; 2001US-0300154P.
 XX
 PA (MAXY-) MAXYGEN APS.
 PA (MAXY-) MAXYGEN HOLDINGS LTD.
 PI Andersen KV, Pedersen AH, Friesgaard PO;
 DR WPI, 2002-489875/52.
 XX
 PT Novel conjugate useful for treating or preventing septic shock, stroke
 PT and myocardial infarction, comprises non-polypeptide group covalently
 XX attached to protein C polypeptide comprising an attachment group.

XX Claim 9; Page; 92pp; English.

XX The invention relates to a conjugate (I) comprising at least one non-
XX polypeptide moiety (II) (e.g. an N-glycosyl group) covalently attached to
CC a protein C polypeptide comprising an amino acid sequence which differs
CC from that of a parent protein C polypeptide (III) in at least one
CC introduced and/or at least one removed amino acid residue comprising an
CC attachment group for the non-polypeptide group (e.g. an N-glycosylation
CC site). Also included are (1) a variant (IV) of (III) comprising a
CC substitution in a position (P) where (P) is an amino acid with at least
CC 25% of its side group exposed to the surface, with the proviso that the
CC substitution is not Thr245Ser/Ala/His/Lys/Arg/Asn/Asp/Glu/Gly/Gln,
CC Tyr302Ser/Ala/Thr/His/Lys/Arg/Asn/Asp/Glu/Gly/Gln or Phe316Ser/Ala/Thr/
CC His/Lys/Arg/Asn/Asp/Glu/Gly/Gln; (2) a nucleotide sequence (V) encoding
CC (IV); (3) an expression vector (VI) comprising (V); (4) a host cell (VII)
CC comprising (V) or (VI); (5) increasing (M2) the functional in vivo half-
CC life of the serum half-life of a parent protein C polypeptide. The
CC conjugates, variants and protein C proteins are useful as medicaments,
CC and in the manufacture of medicaments for the treatment and
CC diagnosis/prevention of stroke, myocardial infarction, after venous
CC thrombosis, disseminated intravascular coagulation (DIC), sepsis, septic
CC shock, emboli e.g. pulmonary emboli, transplantation such as bone marrow
CC transplantation, burns, pregnancy, major surgery/trauma or adult
CC respiratory distress syndrome (ARDS). The variant protein C has an
CC increased resistance to activation by e.g. human plasma and alpha-1
CC antitrypsin. The conjugates have an increased in vivo half-life,
CC increased serum half-life, increased resistance to inhibitors, reduced
CC renal clearance, reduced immunogenicity and/or increased bioavailability.
CC The conjugate offers a number of advantages over the currently available
CC APC products, including longer duration between injections,
CC administration of less protein, and fewer side effects. Moreover, a
CC reduced anticoagulant activity is beneficial to reduce the risk of
CC bleeding while maintaining the antiinflammatory activity of APC
CC (activated protein C) conjugates. This must be especially important when
CC the conjugate has an extended plasma life. The gene for protein C is
CC located on chromosome 2q13-q14. The present sequence represents a zymogen
CC protein C variant of the invention. Note: The present sequence is not
CC shown in the specification but was created by the indexer using the
CC protein C sequence appearing as AMU99002 and the information in claim 9
XX
XX Sequence 419 AA;

Query Match 99.5%; Score 2313; DB 5; Length 419;
Best Local Similarity 99.5%; Pred. No. 1.6e-142;
Matches 417; Conservative 0; Mismatches 2; Indels 0; Gaps 0;

QY 1 ANSFLELHSSLEECIEICDFEPAKEITQNDTFLAFSKHVDGQCLVPLEHPCA 60
DB 1 ANSFLELHSSLEECIEICDFEPAKEITQNDTFLAFSKHVDGQCLVPLEHPCA 60
QY 61 SLCCGHTCIDIGISFSCDRCGMEGRFCQREVSFLNCSLDNGGCTHYCLEEYGMRCSC 120
DB 61 SLCCGHTCIDIGISFSCDRCGMEGRFCQREVSFLNCSLDNGGCTHYCLEEYGMRCSC 120
QY 121 APGYKLGDDLQCHPAVKPCGRPMKMEKKRSHLKEDEDEQVDPRLIDGKMTRRGD 180
DB 121 APGYKLGDDLQCHPAVKPCGRPMKMEKKRSHLKEDEDEQVDPRLIDGKMTRRGD 180
QY 181 SPWQVVLDSKKKACCAVLTIRSWLTTRACOMESKULVRLGEYDIFRMEKEWEDLDI 240
DB 181 SPWQVVLDSKKKACCAVLTIRSWLTTRACOMESKULVRLGEYDIFRMEKEWEDLDI 240
QY 241 KEVHPNYSKSTETNDIALHLAOPATLSQTIPIGLPSGLAREELNQGGFTLVGM 300
DB 241 KENHPNYSKSTETNDIALHLAOPATLSQTIPIGLPSGLAREELNQGGFTLVGM 300
QY 301 GYHSSPEKAKENRTFVNIPIKIVVPNHESEVSNVSNMCAGLIGLRQDACBGDS 360
DB 301 GYHSSPEKAKENRTFVNIPIKIVVPNHESEVSNVSNMCAGLIGLRQDACBGDS 360
QY 361 GGPVVASFHGTFTLVGVSWGEGCLLNHYGYTKVSRYLDMTHGHIDKXAPQKSMAP 419
DB 361 GGPVVASFHGTFTLVGVSWGEGCLLNHYGYTKVSRYLDMTHGHIDKXAPQKSMAP 419

DB 361 GGPVVASFHGTFTLVGVSWGEGCLLNHYGYTKVSRYLDMTHGHIDKXAPQKSMAP 419

RESULT 100
AAU99011
ID AAU99011 standard; protein; 419 AA.
XX
AC AAU99011;
DT 23-AUG-2002 (first entry)
XX
XX Human Protein C zymogen protein mutant K192N/L194S.
XX
KW Human; Protein C; N-glycosylation; APC; activated protein C; zymogen;
KW serum half-life; chromosome 2q13-q14; stroke; myocardial infarction;
KW after septic shock; disseminated intravascular coagulation; DIC;
KW sepsis; septic shock; embolism; pulmonary embolism; burn; pregnancy;
KW bone marrow transplantation; major surgery; trauma; ARDS; coagulant;
KW adult respiratory distress syndrome; alpha-1 antitrypsin; mutant; mutein.
XX
OS Homo sapiens.
OS Synthetic.
XX
XX Key Location/Qualifiers
FH 1..155
FT Protein /label= Light_chain
FT 156..157
FT Peptide /label= Lys_Arg_dipeptide
FT 158..419
FT Protein /label= Heavy_chain
FT 158..169
FT Peptide /label= Activation_peptide
FT Misc-difference 192
FT Misc-difference 194 /note= "Wild-type Lys substituted by Asn"
FT 194 /note= "Wild-type Leu substituted by Ser"
XX
XX MO200232461-A2.
XX
XX 25-APR-2002.
XX
XX 15-OCT-2001; 2001WO-DK000679.
XX
XX 18-OCT-2000; 2000DK-00001560.
XX 18-OCT-2000; 2000US-0242268P.
XX 21-JUN-2001; 2001DK-00000970.
XX 21-JUN-2001; 2001US-0300154P.
XX
XX (MAXY-) MAXYGEN APS.
XX (MAXY-) MAXYGEN HOLDINGS LTD.
XX
PI Andersen KV, Pedersen AH, Friesgaard PO;
XX
XX WPI; 2002-489875/52.
XX
XX
XX Claim 9; Page; 92pp; English.
XX
XX The invention relates to a conjugate (I) comprising at least one non-
XX polypeptide moiety (II) (e.g. an N-glycosyl group) covalently attached to
CC a protein C polypeptide comprising an amino acid sequence which differs
CC from that of a parent protein C polypeptide (III) in at least one
CC introduced and/or at least one removed amino acid residue comprising an
CC attachment group for the non-polypeptide group (e.g. an N-glycosylation
CC site). Also included are (1) a variant (IV) of (III) comprising a
CC substitution in a position (P) where (P) is an amino acid with at least
CC 25% of its side group exposed to the surface, with the proviso that the
CC substitution is not Thr245Ser/Ala/His/Lys/Arg/Asn/Asp/Glu/Gly/Gln,
CC Tyr302Ser/Ala/Thr/His/Lys/Arg/Asn/Asp/Glu/Gly/Gln or Phe316Ser/Ala/Thr/
CC His/Lys/Arg/Asn/Asp/Glu/Gly/Gln; (2) a nucleotide sequence (V) encoding

CC (IV); (3) an expression vector (VI) comprising (V); (4) a host cell (VII)
CC comprising (V) or (VI); (5) increasing (M2) the functional in vivo half-
CC life or the serum half-life of a parent protein C polypeptide. The
CC conjugates, variants and protein C proteins are useful as medicaments,
CC and in the manufacture of medicaments for the treatment (and
CC diagnosis/prevention) of stroke, myocardial infarction, after venous
CC thrombosis, disseminated intravascular coagulation (DIC), sepsis, septic
CC shock, emboli e.g. pulmonary emboli, transplantation such as bone marrow
CC transplantation, burns, pregnancy, major surgery/trauma or adult
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CC increased resistance to activation by e.g. human plasma and alpha-1
CC antitrypsin. The conjugates have an increased in vivo half-life,
CC increased serum half-life, increased resistance to inhibitors, reduced
CC renal clearance, reduced immunogenicity and/or increased bioavailability.
CC The conjugate offers a number of advantages over the currently available
CC APC products, including longer duration between injections,
CC administration of less protein, and fewer side effects. Moreover, a
CC reduced anticoagulant activity is beneficial to reduce the risk of
CC bleeding while maintaining the antiinflammatory activity of APC
CC (activated protein C) conjugates. This must be especially important when
CC the conjugate has an extended plasma life. The gene for protein C is
CC located on chromosome 2q13-q14. The present sequence represents a zymogen
CC protein C variant of the invention. Note: The present sequence is not
CC shown in the specification but was created by the indexer using the
CC protein C sequence appearing as AU99002 and the information in claim 9
XX
SQ Sequence 419 AA;

Query Match 99.5%; Score 2313; DB 5; Length 419;
Best Local Similarity 99.5%; Pred. No. 1,6e-142;
Matches 417; Conservative 0; Mismatch 2; Indels 0; Gaps 0;

QY 1 ANSFLEELRHSIERECIEICDEPEAKEIPONVDLTAFWSXRVWGDCCLVLEPRCA 60
Db 1 ANSFLEELRHSIERECIEICDEPEAKEIPONVDLTAFWSXRVWGDCCLVLEPRCA 60
QY 61 SLCCGSGTCIDIGSFCDCRSWGEGFQREVSFLMCSLDNGGCTHYCLEBVGMRRCSC 120
Db 61 SLCCGSGTCIDIGSFCDCRSWGEGFQREVSFLMCSLDNGGCTHYCLEBVGMRRCSC 120
QY 121 APGYKLDLLOCHPAVYFPCGRPMKMEKSSHKRDTLEQDQVDPRLIDGKMYRRGD 180
Db 121 APGYKLDLLOCHPAVYFPCGRPMKMEKSSHKRDTLEQDQVDPRLIDGKMYRRGD 180
QY 181 SPQGVLLDSSKKLACGAVLHPSPWVLTAAHCDSSKKLAVRAGEVDLBRMKVELDLDI 240
Db 181 SPQGVLLDSSKKLACGAVLHPSPWVLTAAHCDSSKKLAVRAGEVDLBRMKVELDLDI 240
QY 241 KEVTVHBNYSKSTTNDIALHLAOPATLSQTIIVPICLPDSGLAEELNQAQOETLVGW 300
Db 241 KEVTVHBNYSKSTTNDIALHLAOPATLSQTIIVPICLPDSGLAEELNQAQOETLVGW 300
QY 301 GHSSREKREKRRFTVNFETKIPVPHNECEWMSNMVSCGIIIGDROACRGDS 360
Db 301 GHSSREKREKRRFTVNFETKIPVPHNECEWMSNMVSCGIIIGDROACRGDS 360
QY 361 GGPWVASFHGTWFLVGLVSGEGCGLLHNVGVTVTSRYLDMHGHIRDKERAPKSNAP 419
Db 361 GGPWVASFHGTWFLVGLVSGEGCGLLHNVGVTVTSRYLDMHGHIRDKERAPKSNAP 419

RESULT 101

AU99023
ID AU99023 standard; protein; 419 AA.

XX AAU99023;

XX 23-AUG-2002 (first entry)

DE Human Protein C zymogen protein mutant K218N/L220S.

KW Human; Protein C; N-glycosylation; APC; activated protein C; zymogen;
KW serum half-life; chromosome 2q13-q14; stroke; myocardial infarction;

KW after venous thrombosis; disseminated intravascular coagulation; DIC;
KW sepsis; septic shock; embolism; pulmonary embolism; burn; pregnancy;
KW bone marrow transplantation; major surgery; trauma; ARDS; coagulant;
KW adult respiratory distress syndrome; alpha-1 antitrypsin; mutant; mutein.
OS Homo sapiens.
CS Synthetic.
FH Key Location/Qualifiers
FT Protein 1..155
FT Peptide /label= Light_chain
FT Peptide 156..157
FT Protein /label= Lys_Arg_dipeptide
FT Peptide 158..419
FT Peptide /label= Heavy_chain
FT Peptide 158..169
FT Peptide /label= Activation_peptide
FT Misc-difference 218
FT Misc-difference 218 /note= "Wild-type Lys substituted by Asn"
FT Misc-difference 220 /note= "Wild-type Leu substituted by Ser"
PD W0200232461-A2.
PN 25-APR-2002.
PD 15-OCT-2001; 2001WO-DK00679.
PF 18-OCT-2000; 2000DK-00001560.
PR 18-OCT-2000; 2000US-0242268P.
PR 21-JUN-2001; 2001DK-00000970.
PR 21-JUN-2001; 2001US-0300154P.
XX (MAXY-) MAXYGEN ABS.
PA (MAXY-) MAXYGEN HOLDINGS LTD.
PI Andersen KV, Pedersen AH, Friesgaard PO;
XX WPI; 2002-489875/52.
XX
PT Novel conjugate useful for treating or preventing septic shock, stroke
PT and myocardial infarction, comprises non-polypeptide group covalently
PT attached to protein C polypeptide comprising an attachment group.
XX
PS Claim 9; Page; 92pp; English.
CC The invention relates to a conjugate (I) comprising at least one non-
CC polypeptide moiety (II) (e.g. an N-glycosyl group) covalently attached to
CC a protein C polypeptide comprising an amino acid sequence which differs
CC from that of a parent protein C polypeptide (III) in at least one
CC introduced and/or at least one removed amino acid residue comprising an
CC attachment group for the non-polypeptide group (e.g. an N-glycosylation
CC site). Also included are (I) a variant (IV) of (III) comprising a
CC substitution in a position (P) where (P) is an amino acid with at least
CC 25% of its side group exposed to the surface, with the proviso that the
CC substitution is not Thr245Ser/Ala/His/Lys/Arg/Asn/Asp/Glu/Gly/Gln,
CC Ty303Ser/Ala/Thr/His/Lys/Arg/Asn/Asp/Glu/Gly/Gln or Phe316Ser/Ala/Thr/
CC His/Lys/Arg/Asn/Asp/Glu/Gly/Gln; (2) a nucleotide sequence (V) encoding
CC (IV); (3) an expression vector (VI) comprising (V); (4) a host cell (VII)
CC comprising (V) or (VI); (5) increasing (M2) the functional in vivo half-
CC life or the serum half-life of a parent protein C polypeptide. The
CC conjugates, variants and protein C proteins are useful as medicaments,
CC and in the manufacture of medicaments for the treatment (and
CC diagnosis/prevention) of stroke, myocardial infarction, after venous
CC thrombosis, disseminated intravascular coagulation (DIC), sepsis, septic
CC shock, emboli e.g. pulmonary emboli, transplantation such as bone marrow
CC transplantation, burns, pregnancy, major surgery/trauma or adult
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CC increased resistance to activation by e.g. human plasma and alpha-1
CC antitrypsin. The conjugates have an increased in vivo half-life,
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 CC bleeding while maintaining the antiinflammatory activity of APC
 CC (activated protein C) conjugates. This must be especially important when
 CC the conjugate has an extended plasma life. The gene for protein C is
 CC located on chromosome 2q13-q14. The present sequence represents a zymogen
 CC protein C variant of the invention. Note: The present sequence is not
 CC shown in the specification but was created by the indexer using the
 CC protein C sequence appearing as AAU99002 and the information in claim 9
 XX
 SQ Sequence 419 AA;

Query Match 99.5%; Score 2313; DB 5; Length 419;
 Best Local Similarity 99.5%; Pred. No. 1,6e-142;
 Matches 417; Conservative 0; Mismatches 2; Indels 0; Gaps 0;

QY 1 ANSFLELRHSSLSRECEIEICDFEAEKIFQVNDPTLAFMSKRVDDQCLVPLEHPCA 60
 DB 1 ANSFLELRHSSLSRECEIEICDFEAEKIFQVNDPTLAFMSKRVDDQCLVPLEHPCA 60
 QY 61 SLCCGHGTCIDIGISFSCDGRSGWEGRPQREVSFLNCSLDNGGCTHYCLEEYWGRRSC 120
 DB 61 SLCCGHGTCIDIGISFSCDGRSGWEGRPQREVSFLNCSLDNGGCTHYCLEEYWGRRSC 120
 QY 121 APGYKLGDDLLQCHPAKPCGPKMKREKRSKLRDDEDDQVDPRLIDGKMRBGD 180
 DB 121 APGYKLGDDLLQCHPAKPCGPKMKREKRSKLRDDEDDQVDPRLIDGKMRBGD 180
 QY 181 SPQVVLDSKKKLACGAVLIHPSWLTNAHODSKKLVLRLGEYDLRMEWELEDDLI 240
 DB 181 SPQVVLDSKKKLACGAVLIHPSWLTNAHODSKKLVLRLGEYDLRMEWELEDDLI 240
 QY 241 KEVFNPNYSSTINDIALHLAQPATLSGTVPLCPDGLARELNAQAGETLVYGM 300
 DB 241 KEVFNPNYSSTINDIALHLAQPATLSGTVPLCPDGLARELNAQAGETLVYGM 300
 QY 301 GYSSEKREKRNKTFVLANFKIPVPHNESEVSNWSENNLCAGILDRQDAEGDS 360
 DB 301 GYSSEKREKRNKTFVLANFKIPVPHNESEVSNWSENNLCAGILDRQDAEGDS 360
 QY 361 GGMVASFHGTWFLVGLVSWGECGLLNLYGVYTKRSRYLWINGHRLRDEAPQKSMAP 419
 DB 361 GGMVASFHGTWFLVGLVSWGECGLLNLYGVYTKRSRYLWINGHRLRDEAPQKSMAP 419

RESULT 102
 AAU99084
 ID AAU99084 standard; protein; 419 AA.
 XX
 AC AAU99084;
 XX
 DT 23-AUG-2002 (first entry)
 XX
 DE Human Protein C zymogen protein mutant R352N/D354T.
 XX
 XX Human; Protein C; N-glycosylation; APC; activated protein C; zymogen;
 KM serum half-life; chromosome 2q13-q14; stroke; myocardial infarction;
 KM after venous thrombosis; disseminated intravascular coagulation; DIC;
 KM sepsis; septic shock; embolism; pulmonary embolism; burn; pregnancy;
 KM bone marrow transplantation; major surgery; trauma; AIDS; coagulant;
 KM adult respiratory distress syndrome; alpha-1 antitrypsin; mutant; mteuin.
 XX
 OS Homo sapiens.
 XX
 XX Synthetic.
 EH Key Location/Qualifiers
 FT Protein 1..155
 FT Peptide /label= Light_chain
 FT /label= Lys_Arg_dipeptide
 FT /label= Heavy_chain
 FT 158..419

FT Peptide 158..169
 FT /label= Activation_peptide
 FT Misc-difference 352
 FT /note= "Wild-type Arg substituted by Asn"
 FT Misc-difference 354
 FT /note= "Wild-type Asp substituted by Thr"
 FN WO200232461-A2.
 PD 25-APR-2002.
 XX
 PD 15-OCT-2001; 2001MO-DK00679.
 XX
 PR 18-OCT-2000; 2000DK-00001560.
 PR 18-OCT-2000; 2000DS-024268P.
 PR 21-JUN-2001; 2001DK-00000970.
 PR 21-JUN-2001; 2001US-0300154P.
 XX
 PA (MAXY-) MAXYGEN APS.
 PA (MAXY-) MAXYGEN HOLDINGS LTD.
 XX
 PT Andersen KV, Pedersen AH, Friesgaard PO;
 DR WPI; 2002-489875/52.
 XX
 PT Novel conjugate useful for treating or preventing septic shock, stroke
 PT and myocardial infarction, comprises non-polypeptide group covalently
 PT attached to protein C polypeptide comprising an attachment group.
 XX
 PS Claim 9; Page; 92pp; English.
 XX
 CC The invention relates to a conjugate (I) comprising at least one non-
 CC polypeptide moiety (II) (e.g. an N-glycosyl group) covalently attached to
 CC a protein C polypeptide comprising an amino acid sequence which differs
 CC from that of a parent protein C polypeptide (III) in at least one
 CC introduced and/or at least one removed amino acid residue comprising an
 CC attachment group for the non-polypeptide group (e.g. an N-glycosylation
 CC site). Also included are (1) a variant (IV) of (III) comprising a
 CC substitution in a position (P) where (P) is an amino acid with at least
 CC 2% of its side group exposed to the surface, with the proviso that the
 CC substitution is not Thr245Ser/Ala/His/Lys/Arg/Asn/Asp/Glu/Gly/Gln/
 CC Tyr302Ser/Ala/Thr/His/Lys/Arg/Asn/Asp/Glu/Gly/Gln or Phe315Ser/Ala/Thr/
 CC His/Lys/Arg/Asn/Asp/Glu/Gly/Gln; (2) a nucleotide sequence (V) encoding
 CC (IV); (3) an expression vector (VI) comprising (V); (4) a host cell (VII)
 CC comprising (V) or (VI); (5) increasing (M2) the functional in vivo half-
 CC life or the serum half-life of a parent protein C polypeptide. The
 CC conjugates, variants and protein C proteins are useful as medicaments,
 CC and in the manufacture of medicaments for the treatment (and
 CC diagnosis/prevention) of stroke, myocardial infarction (DIC), sepsis, septic
 CC shock, emboli e.g. pulmonary emboli, transplantation such as bone marrow
 CC transplantation, burns, pregnancy, major surgery/trauma or adult
 CC respiratory distress syndrome (ARDS). The variant protein C has an
 CC increased resistance to activation by e.g. human plasma and alpha-1
 CC antitrypsin. The conjugates have an increased in vivo half-life,
 CC increased serum half-life, increased resistance to inhibitors, reduced
 CC renal clearance, reduced immunogenicity and/or increased bioavailability.
 CC The conjugate offers a number of advantages over the currently available
 CC APC products, including longer duration between injections.
 CC administration of less protein, and fewer side effects. Moreover, a
 CC reduced anticoagulant activity is beneficial to reduce the risk of
 CC bleeding while maintaining the antiinflammatory activity of APC
 CC (activated protein C) conjugates. This must be especially important when
 CC the conjugate has an extended plasma life. The gene for protein C is
 CC located on chromosome 2q13-q14. The present sequence represents a zymogen
 CC protein C variant of the invention. Note: The present sequence is not
 CC shown in the specification but was created by the indexer using the
 CC protein C sequence appearing as AAU99002 and the information in claim 9
 XX
 SQ Sequence 419 AA;

Query Match 99.5%; Score 2312; DB 5; Length 419;
 Best Local Similarity 99.5%; Pred. No. 1,6e-142;

Matches 417; Conservative 0; Mismatches 2; Indels 0; Gaps 0;

QY 1 ANSFLEIRHSSLERECIEICDEFEAKEIFQVNDPTLAWSKVDQCLVLEHPQA 60
 DB 1 ANSFLEIRHSSLERECIEICDEFEAKEIFQVNDPTLAWSKVDQCLVLEHPQA 60
 QY 61 SLCCGAGTCIDIGISFSCDCRSQWEGRFQREVSFLNCSLDNGCTHYCLEEVMRSCSC 120
 DB 61 SLCCGAGTCIDIGISFSCDCRSQWEGRFQREVSFLNCSLDNGCTHYCLEEVMRSCSC 120
 QY 121 APGYKLGDDLLQCHPAVKEPCGRPWMEKRSKSHLKDTEDQEDQVDPRLIDGKMTRRGD 180
 DB 121 APGYKLGDDLLQCHPAVKEPCGRPWMEKRSKSHLKDTEDQEDQVDPRLIDGKMTRRGD 180
 QY 181 SPWQVVLDSKKKLACGAVLIHPSWVLTAAHOMDSKKLVRLGEGVDLRRKKEMLDDI 240
 DB 181 SPWQVVLDSKKKLACGAVLIHPSWVLTAAHOMDSKKLVRLGEGVDLRRKKEMLDDI 240
 QY 241 KEVEHPNYSKSTTNDIALHIAOPATLSQTIYVLCIPDSGLARELNQAGETLVTCM 300
 DB 241 KEVEHPNYSKSTTNDIALHIAOPATLSQTIYVLCIPDSGLARELNQAGETLVTCM 300
 QY 301 GHSSREKAKNRFFVINFIKIPVVPNECSVMSNMVSENNLCAGILIGRQACEGDS 360
 DB 301 GHSSREKAKNRFFVINFIKIPVVPNECSVMSNMVSENNLCAGILIGRQACEGDS 360
 QY 361 GGPVVASFHGTWFLVGLVSGEGCGLLHNGYVTVSSRYLDWTHGTHDKEAPQKSWAP 419
 DB 361 GGPVVASFHGTWFLVGLVSGEGCGLLHNGYVTVSSRYLDWTHGTHDKEAPQKSWAP 419

RESULT 103
 AAU99061
 ID AAU99061 standard; protein: 419 AA.
 AC AAU99061;
 XX 23-AUG-2002 (first entry)
 DT
 XX Human Protein C zymogen protein mutant A310N/R312S.
 DE
 XX Human; Protein C; N-glycosylation; APC; activated protein C; zymogen;
 KW serum half-life; chromosome 2q13-q14; stroke; myocardial infarction;
 KW after venous thrombosis; disseminated intravascular coagulation; DIC;
 KW sepsis; septic shock; embolism; pulmonary embolism; burn; pregnancy;
 KW bone marrow transplantation; major surgery; trauma; ARDS; coagulant;
 KW adult respiratory distress syndrome; alpha-1 antitrypsin; mutant; mutein.
 XX
 OS Homo sapiens.
 XX Synthetic.
 PH
 XX Key Location/Qualifiers
 FT 1..155 /label= Light_chain
 FT 156..157 /label= Lys_Arg_dipeptide
 FT Protein /label= Lys_Arg_dipeptide
 FT 158..419 /label= Heavy_chain
 FT Peptide /label= Activation_peptide
 FT MISC-difference 310 /note= "Wild-type Ala substituted by Asn"
 FT MISC-difference 312 /note= "Wild-type Arg substituted by Ser"
 FT
 XX NO200232461-A2.
 XX
 PD 25-APR-2002.
 XX
 PF 15-OCT-2001; 2001MO-DK000679.
 XX
 PR 18-OCT-2000; 2000DK-00001560.
 XX
 PR 18-OCT-2000; 2000DS-0242268P.

PR 21-JUN-2001; 2001DK-00000970.
 PR 21-JUN-2001; 2001DS-0300154P.
 XX (MAXY-) MAXYGEN APS.
 PA (MAXY-) MAXYGEN FINDINGS LTD.
 XX
 PI Andersen KV, Pedersen AH, Freskgaard PO;
 DR WPI; 2002-489675/52.
 XX
 PT Novel conjugate useful for treating septic shock, stroke
 PT and myocardial infarction, comprises non-polypeptide group covalently
 PT attached to protein C polypeptide comprising an attachment group.
 XX
 PS Claim 9, Page: 92pp: English.
 CC The invention relates to a conjugate (I) comprising at least one non-
 CC polypeptide moiety (II) (e.g. an N-glycosyl group) covalently attached to
 CC a protein C polypeptide comprising an amino acid sequence which differs
 CC from that of a parent protein C polypeptide (III) in at least one
 CC introduced and/or at least one removed amino acid residue comprising an
 CC attachment group for the non-polypeptide group (e.g. an N-glycosylation
 CC site). Also included are (1) a variant (IV) of (III) comprising a
 CC substitution in a position (P) where (P) is an amino acid with at least
 CC 25% of its side group exposed to the surface, with the proviso that the
 CC substitution is not Thr245Ser/Ala/His/Lys/Arg/Asn/Asp/Glu/Gly/Gln,
 CC Tyr330Ser/Ala/Thr/His/Lys/Arg/Asn/Asp/Glu/Gly/Gln or Phe316Ser/Ala/Thr/
 CC His/Lys/Arg/Asn/Asp/Glu/Gly/Gln; (2) a nucleotide sequence (V) encoding
 CC (IV); (3) an expression vector (VI) comprising (V); (4) a host cell (VII)
 CC comprising (V) or (VI); (5) increasing (M2) the functional in vivo half-
 CC life or the serum half-life of a parent protein C polypeptide. The
 CC conjugates, variants and protein C proteins are useful as medicaments,
 CC and in the manufacture of medicaments for the treatment (and
 CC diagnosis/prevention) of stroke, myocardial infarction, after venous
 CC thrombosis, disseminated intravascular coagulation (DIC), sepsis, septic
 CC shock, emboli e.g. pulmonary emboli, transplantation such as bone marrow
 CC transplantation, burns, pregnancy, major surgery/trauma or adult
 CC respiratory distress syndrome (ARDS). The variant protein C has an
 CC increased resistance to activation by e.g. human plasma and alpha-1
 CC antitrypsin. The conjugates have an increased in vivo half-life.
 CC Increased serum half-life, increased resistance to inhibitors, reduced
 CC renal clearance, reduced immunogenicity and/or increased bioavailability.
 CC The conjugate offers a number of advantages over the currently available
 CC APC products, including longer duration between injections.
 CC administration of less protein, and fewer side effects. Moreover, a
 CC reduced anticoagulant activity is beneficial to reduce the risk of
 CC bleeding while maintaining the anti-inflammatory activity of APC
 CC (activated protein C) conjugates. This must be especially important when
 CC the conjugate has an extended plasma life. The gene for protein C is
 CC located on chromosome 2q13-q14. The present sequence represents a zymogen
 CC protein C variant of the invention. Note: The present sequence is not
 CC shown in the specification but was created by the indexer using the
 CC protein C sequence appearing as AAU99002 and the information in claim 5
 CC
 XX
 SQ Sequence 419 AA;
 Query Match 99.5%; Score 2312; DB 5; Length 419;
 Best Local Similarity 99.5%; Pred. No. 1,8e-142;
 Matches 417; Conservative 0; Mismatches 2; Indels 0; Gaps 0;

QY 1 ANSFLEIRHSSLERECIEICDEFEAKEIFQVNDPTLAWSKVDQCLVLEHPQA 60
 DB 1 ANSFLEIRHSSLERECIEICDEFEAKEIFQVNDPTLAWSKVDQCLVLEHPQA 60
 QY 61 SLCCGAGTCIDIGISFSCDCRSQWEGRFQREVSFLNCSLDNGCTHYCLEEVMRSCSC 120
 DB 61 SLCCGAGTCIDIGISFSCDCRSQWEGRFQREVSFLNCSLDNGCTHYCLEEVMRSCSC 120
 QY 121 APGYKLGDDLLQCHPAVKEPCGRPWMEKRSKSHLKDTEDQEDQVDPRLIDGKMTRRGD 180
 DB 121 APGYKLGDDLLQCHPAVKEPCGRPWMEKRSKSHLKDTEDQEDQVDPRLIDGKMTRRGD 180
 QY 181 SPWQVVLDSKKKLACGAVLIHPSWVLTAAHOMDSKKLVRLGEGVDLRRKKEMLDDI 240

DB 181 SPWQVLLDSKKKACGAVLIHPSWVLTAAHOMDESKKLVLEGEYDLRREKWEJLDLDI 240
 QY 241 KEVFHFNYSKSTNDNDIALHLAQPATLSQTVICLPDGLAEERLNAGQETLVYGM 300
 DB 241 KEVFHFNYSKSTNDNDIALHLAQPATLSQTVICLPDGLAEERLNAGQETLVYGM 300
 QY 301 GYHSSREKEAKRRTFVNLFIKIPVPHNECESEVSNMVSNNMLCAGILGRDACEGDS 360
 DB 301 GYHSSREKENSNRTFVNLFIKIPVPHNECESEVSNMVSNNMLCAGILGRDACEGDS 360
 QY 361 GGFNVASFEHGTWFLVGLVSWGEGCGLLHNYGVYTKVSRYLWDHGHTRDEKAPQKSMAP 419
 DB 361 GGFNVASFEHGTWFLVGLVSWGEGCGLLHNYGVYTKVSRYLWDHGHTRDEKAPQKSMAP 419

RESULT 104

AAU99046
 ID AAU99046 standard; protein: 419 AA.

AC AAU99046;

DT 23-AUG-2002 (first entry)

DE Human protein C zymogen protein mutant Y302N/S304T.

KM Human; Protein C; N-glycosylation; APC; activated protein C; zymogen;

KM serum half-life; chromosome 2q13-q14; stroke; myocardial infarction;

KM after venous thrombosis; disseminated intravascular coagulation; DIC;

KM sepsis; septic shock; embolism; pulmonary embolism; burn; pregnancy;

KM bone marrow transplantation; major surgery; trauma; ARDS; coagulant;

KM adult respiratory distress syndrome; alpha-1 antitrypsin; mutant; mutein.

OS Homo sapiens.

XX Synthetic.

FT Key Location/Qualifiers

FT Protein 1..155

FT Peptide /label= Light_chain

FT Protein /label= Lys_Arg_dipeptide

FT Peptide /label= Heavy_chain

FT Peptide /label= Activation_peptide

FT Misc-difference 302

FT /note= "Wild-type Tyr substituted by Asn"

FT Misc-difference 304

FT /note= "Wild-type Ser substituted by Thr"

XX WO200232461-A2.

XX 25-APR-2002.

XX 15-OCT-2001; 2001MO-DK000679.

XX 18-OCT-2000; 2000DK-00001560.

XX 18-OCT-2000; 2000US-0242268P.

XX 21-JUN-2001; 2001DK-00000970.

XX 21-JUN-2001; 2001US-0300154P.

XX (MAXY-) MAXYGEN ABS.

XX (MAXY-) MAXYGEN HOLDINGS LTD.

XX Andersen KV, Pedersen AH, Friesgaard PO;

XX WPI; 2002-489875/52.

PT Novel conjugate useful for treating or preventing septic shock, stroke

PT and myocardial infarction, comprises non-polypeptide group covalently

PT attached to protein C polypeptide comprising an attachment group.

PS Claim 9; Page; 92pp; English.

XX The invention relates to a conjugate (I) comprising at least one non-
 CC polypeptide moiety (II) (e.g. an N-glycosyl group) covalently attached to
 CC a protein C polypeptide comprising an amino acid sequence which differs
 CC from that of a parent protein C polypeptide (III) in at least one
 CC introduced and/or at least one removed amino acid residue comprising an
 CC attachment group for the non-polypeptide group (e.g. an N-glycosylation
 CC site). Also included are (I) a variant (IV) of (III) comprising a
 CC substitution in a position (p) where (p) is an amino acid with at least
 CC 25% of its side group exposed to the surface, with the proviso that the
 CC substitution is not Thr245Ser/Ala/His/Lys/Arg/Asn/Asp/Glu/Gly/Gln/
 CC Tyr302Ser/Ala/Thr/His/Lys/Arg/Asn/Asp/Glu/Gly/Gln or Phe316Ser/Ala/Thr/
 CC His/Lys/Arg/Asn/Asp/Glu/Gly/Gln; (2) a nucleotide sequence (V) encoding
 CC (IV); (3) an expression vector (VI) comprising (IV); (4) a host cell (VII)
 CC comprising (V) or (VI); (5) increasing (M2) the functional in vivo half-
 CC life of the serum half-life of a parent protein C polypeptide. The
 CC conjugates, variants and protein C proteins are useful as medicaments,
 CC and in the manufacture of medicaments for the treatment (and
 CC diagnosis/prevention) of stroke, myocardial infarction, after venous
 CC thrombosis, disseminated intravascular coagulation (DIC), sepsis, septic
 CC shock, emboli e.g. pulmonary emboli, transplantation such as bone marrow
 CC transplantation, burns, pregnancy, major surgery/trauma or adult
 CC respiratory distress syndrome (ARDS). The variant protein C has an
 CC increased resistance to activation by e.g. human plasma and alpha-1
 CC antitrypsin. The conjugates have an increased in vivo half-life,
 CC increased serum half-life, increased resistance to inhibitors, reduced
 CC renal clearance, reduced immunogenicity and/or increased bioavailability.
 CC The conjugate offers a number of advantages over the currently available
 CC APC products, including longer duration between infusions,
 CC administration of less protein, and fewer side effects. Moreover, a
 CC reduced anticoagulant activity is beneficial to reduce the risk of
 CC bleeding while maintaining the antiinflammatory activity of APC
 CC (activated protein C) conjugates. This must be especially important when
 CC the conjugate has an extended plasma life. The gene for protein C is
 CC located on chromosome 2q13-q14. The present sequence represents a zymogen
 CC protein C variant of the invention. Note: The present sequence is not
 CC shown in the specification but was created by the indexer using the
 CC protein C sequence appearing as AAU9902 and the information in claim 9
 CC XX

SQ Sequence 419 AA;

Query Match 99.5%; Score 2312; DB 5; Length 419;

Best Local Similarity 99.5%; Pred. No. 1,8e-142; Matches 417; Conservative 1; Mismatches 1; Indels 0; Gaps 0;

QY 1 ANSFLERLNHSSLERECIEICDFFBEAKEIFQNVDDTLAFMSKRVNDGQCVLPLEPQA 60
 DB 1 ANSFLERLNHSSLERECIEICDFFBEAKEIFQNVDDTLAFMSKRVNDGQCVLPLEPQA 60
 QY 61 SLCCGHTCIDIIGISFSCDCRSQWEGRFQWRFVFNCSLDNGGCTHYCLEEYVWRRCSC 120
 DB 61 SLCCGHTCIDIIGISFSCDCRSQWEGRFQWRFVFNCSLDNGGCTHYCLEEYVWRRCSC 120
 QY 121 APGYKGGDILLOCHPAVAFPCGRPMKREKRSKHKDTEQEDQVDPRLIDGKQTRRD 180
 DB 121 APGYKGGDILLOCHPAVAFPCGRPMKREKRSKHKDTEQEDQVDPRLIDGKQTRRD 180
 QY 181 SPWQVLLDSKKKACGAVLIHPSWVLTAAHOMDESKKLVLEGEYDLRREKWEJLDLDI 240
 DB 181 SPWQVLLDSKKKACGAVLIHPSWVLTAAHOMDESKKLVLEGEYDLRREKWEJLDLDI 240
 QY 241 KEVFHFNYSKSTNDNDIALHLAQPATLSQTVICLPDGLAEERLNAGQETLVYGM 300
 DB 241 KEVFHFNYSKSTNDNDIALHLAQPATLSQTVICLPDGLAEERLNAGQETLVYGM 300
 QY 301 GYHSSREKEAKRRTFVNLFIKIPVPHNECESEVSNMVSNNMLCAGILGRDACEGDS 360
 DB 301 GYHSSREKEAKRRTFVNLFIKIPVPHNECESEVSNMVSNNMLCAGILGRDACEGDS 360
 QY 361 GGFNVASFEHGTWFLVGLVSWGEGCGLLHNYGVYTKVSRYLWDHGHTRDEKAPQKSMAP 419
 DB 361 GGFNVASFEHGTWFLVGLVSWGEGCGLLHNYGVYTKVSRYLWDHGHTRDEKAPQKSMAP 419

XX	RESULT 105
XX	AAM99062
XX	ID AAM99062 standard; protein: 419 AA.
XX	AC
XX	AD99062;
XX	23-AUG-2002 (first entry)
XX	Human Protein C zymogen protein mutant A310N/R312T.
XX	Human; Protein C; N-glycosylation; ABC; activated protein C; zymogen;
XX	serum half-life; chromosome 2q13-q14; stroke; myocardial infarction;
XX	after venous thrombosis; disseminated intravascular coagulation; DIC;
XX	sepsis; septic shock; embolism; pulmonary embolism; burn; pregnancy;
XX	bone marrow transplantation; major surgery; trauma; ARDS; coagulant;
XX	adult respiratory distress syndrome; alpha-1 antitrypsin; mutant; mutin.
XX	Hom sapiens.
XX	Synthetic.
XX	Key
XX	Location/Qualifiers
XX	1..155
XX	/label= Light_chain
XX	156..157
XX	/label= Lys_Arg_dipeptide
XX	158..419
XX	/label= Heavy_chain
XX	158..169
XX	/label= Activation_peptide
XX	Misc-difference
XX	310
XX	/note= "Wild-type Ala substituted by Asn"
XX	Misc-difference
XX	312
XX	/note= "Wild-type Arg substituted by Thr"
XX	WO200232461-A2.
XX	25-APR-2002.
XX	15-OCT-2001; 2001MO-DK000679.
XX	18-OCT-2000; 2000DK-00001560.
XX	18-OCT-2000; 2000US-0242268P.
XX	21-JUN-2001; 2001DK-00000970.
XX	21-JUN-2001; 2001US-0300154P.
XX	(MAXY-) MAXYGEN APS.
XX	(MAXY-) MAXYGEN HOLDINGS LTD.
XX	Andersen KV, Pedersen AH, Friesgaard PO;
XX	WPI; 2002-489875/52.
XX	Novel conjugate useful for treating or preventing septic shock, stroke
XX	and myocardial infarction, comprises non-polypeptide group covalently
XX	attached to protein C polypeptide comprising an attachment group.
XX	Claim 9, Page; 92pp; English.
XX	The invention relates to a conjugate (I) comprising at least one non-
XX	polypeptide moiety (II) (e.g. an N-glycosyl group) covalently attached to
XX	a protein C polypeptide comprising an amino acid sequence which differs
XX	from that of a parent protein C polypeptide (III) in at least one
XX	attached and/or at least one removed amino acid residue comprising an
XX	attachment group for the non-polypeptide group (e.g. an N-glycosylation
XX	site). Also included are (1) a variant (IV) of (III) comprising a
XX	substitution in a position (P) where (P) is an amino acid with at least
XX	2% of its side group exposed to the surface, with the proviso that the
XX	substitution is not Thr245Ser/Ala/His/Lys/Arg/Asn/Asp/Glu/Gly/His/
XX	Tyr323Ser/Ala/Thr/His/Lys/Arg/Asn/Asp/Glu/Gly/Gln or Phe313Ser/Ala/Thr/
XX	His/Lys/Arg/Asn/Asp/Glu/Gly/Gln; (2) a nucleotide sequence (V) encoding
XX	(IV); (3) an expression vector (VI) comprising (V); (4) a host cell (VII)
XX	comprising (V) or (VI); (5) increasing (W2) the functional in vivo half-

KM bone marrow transplantation; major surgery; trauma; ARDS; coagulant;
 KM adult respiratory distress syndrome; alpha-1 antitrypsin; mutant; mutein.
 XX
 OS Homo sapiens.
 OS Synthetic.
 XX
 FH Key
 FT Location/Qualifiers
 FT 1..155
 FT /label= Light_chain
 FT Peptide
 FT 156..157
 FT /label= Lys_Arg_dipeptide
 FT Protein
 FT 158..419
 FT /label= Heavy_chain
 FT Peptide
 FT 158..169
 FT /label= Activation_peptide
 FT Misc-difference 253
 FT /note= "Wild-type Thr substituted by Asn"
 FT Misc-difference 255
 FT /note= "Wild-type Asp substituted by Thr"
 FT
 XX MO200232461-A2.
 XX
 XX 25-APR-2002.
 XX
 XX 15-OCT-2001; 2001MO-DK000679.
 XX
 XX 18-OCT-2000; 2000DK-00001560.
 XX 18-OCT-2000; 2000US-0242268P.
 XX 21-JUN-2001; 2001DK-00000970.
 XX 21-JUN-2001; 2001US-0300154P.
 XX
 PA (MAXY-) MAXYGEN APS.
 PA (MAXY-) MAXYGEN HOLDINGS LTD.
 XX
 PI Andersen KV, Federsen AH, Freskgaard PO;
 DR WE1; 2002-489875/52.
 XX
 PT Novel conjugate useful for treating or preventing septic shock, stroke
 PT and myocardial infarction, comprises non-polypeptide group covalently
 PT attached to protein C polypeptide comprising an attachment group.
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 CC introduced and/or at least one removed amino acid residue comprising an
 CC attachment group for the non-polypeptide group (e.g. an N-glycosylation
 CC site). Also included are (1) a variant (IV) of (III) comprising a
 CC substitution in a position (p) where (p) is an amino acid with at least
 CC 25% of its side group exposed to the surface, with the proviso that the
 CC substitution is not Thr24Ser/Ala/His/Lys/Arg/Asn/Asp/Glu/Gly/Gln,
 CC Tyr302Ser/Ala/Thr/His/Lys/Arg/Asn/Asp/Glu/Gly/Gln or Phe36Ser/Ala/Thr/
 CC His/Lys/Arg/Asn/Asp/Glu/Gly/Gln; (2) a nucleotide sequence (V) encoding
 CC (IV); (3) an expression vector (VI) comprising (V); (4) a host cell (VII)
 CC comprising (V) or (VI); (5) increasing (W2) the functional in vivo half-
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 CC shock, emboli e.g. pulmonary emboli, transplantation such as bone marrow
 CC transplantation, burns, pregnancy, major surgery/trauma or adult
 CC respiratory distress syndrome (ARDS). The variant protein C has an
 CC increased resistance to activation by e.g. human plasma and alpha-1
 CC antitrypsin. The conjugates have an increased resistance to inhibitors, reduced
 CC increased serum half-life, increased resistance to inhibitors, reduced
 CC renal clearance, reduced immunogenicity and/or increased bioavailability.
 CC The conjugate offers a number of advantages over the currently available
 CC APC products, including longer duration between injections,
 CC administration of less protein, and fewer side effects. Moreover, a

CC reduced anticoagulant activity is beneficial to reduce the risk of
 CC bleeding while maintaining the antiinflammatory activity of APC
 CC (activated protein C) conjugates. This must be especially important when
 CC the conjugate has an extended plasma life. The gene for protein C is
 CC located on chromosome 2q13-q14. The present sequence represents a zymogen
 CC protein C variant of the invention. Note: The present sequence is not
 CC shown in the specification but was created by the indexer using the
 CC protein C sequence appearing as AAU99002 and the information in claim 9
 XX
 XX Sequence 419 AA.
 SQ
 Query Match 99.5%; Score 2312; DB 5; Length 419;
 Best Local Similarity 99.5%; Pred. No. 1.8e-142;
 Matches 417; Conservative 0; Mismatches 2; Indels 0; Gaps 0;
 QY 1 ANSTLEBTHSSLEBCEBETCPFEBAKTIQNDPTLAWSHYVDGOCVLEBEPKA 60
 DB 1 ANSFLEBTHSSLEBCEBETCPFEBAKTIQNDPTLAWSHYVDGOCVLEBEPKA 60
 QY 61 SLCCGHTCTIDGIGSFSCDGRSGMEGRFCOREVSEFLNCSIDNGCTHYCLEVGMGRCSG 120
 DB 61 SLCCGHTCTIDGIGSFSCDGRSGMEGRFCOREVSEFLNCSIDNGCTHYCLEVGMGRCSG 120
 QY 121 APGYKIGDILQCHPAVPEPCGRPWKMEKRSKSHKEDTEDQEDQVDPRLIDGKATERRD 180
 DB 121 APGYKIGDILQCHPAVPEPCGRPWKMEKRSKSHKEDTEDQEDQVDPRLIDGKATERRD 180
 QY 181 SPWQVVLDSKKKLAQGAVALIHPSWVLTAAHOMESKKLLVRLGEVDLRRMEKVELDLDI 240
 DB 181 SPWQVVLDSKKKLAQGAVALIHPSWVLTAAHOMESKKLLVRLGEVDLRRMEKVELDLDI 240
 QY 241 KEVFEHPNYSKSTYNDIALHLAOPALISQTIYVCLPDPSGLAEHLENOAGSETLVTVG 300
 DB 241 KEVFEHPNYSKSTYNDIALHLAOPALISQTIYVCLPDPSGLAEHLENOAGSETLVTVG 300
 QY 301 GYHSSREKREKRRFPVNFRTKIPVPHNEGSEVNSNVSBNLCAGLIGRODAEGDS 360
 DB 301 GYHSSREKREKRRFPVNFRTKIPVPHNEGSEVNSNVSBNLCAGLIGRODAEGDS 360
 QY 361 GGPWVASFHGTFWFLVGLVSMGEGGLLHNYGVYTVSRVLDLHGHIRDKAPQKSNAP 419
 DB 361 GGPWVASFHGTFWFLVGLVSMGEGGLLHNYGVYTVSRVLDLHGHIRDKAPQKSNAP 419
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 XX Human Protein C zymogen protein mutant G383N/G385S.
 XX
 XX Homo sapiens.
 OS
 OS Synthetic.
 XX
 FH Key
 FT Location/Qualifiers
 FT 1..155
 FT /label= Light_chain
 FT Peptide
 FT 156..157
 FT /label= Lys_Arg_dipeptide
 FT Protein
 FT 158..419
 FT /label= Heavy_chain
 FT Peptide
 FT 158..169
 FT /label= Activation_peptide

FT Misc-difference 383 /note= "Wild-type Gly substituted by Asn"
 FT FT Misc-difference 385 /note= "Wild-type Gly substituted by Ser"
 FT XX WO200232461-A2.
 XX PD 25-APR-2002.
 XX PF 15-OCT-2001; 2001WO-DK000679.
 XX PR 18-OCT-2000; 2000DK-00001560.
 XX PR 18-OCT-2000; 2000US-0242268P.
 XX PR 21-JUN-2001; 2001DK-00000970.
 XX PR 21-JUN-2001; 2001US-0300154P.
 XX PA (MAXY-) MAXYGEN APS.
 XX PA (MAXY-) MAXYGEN HOLDINGS LTD.
 XX P1 Andersen KV, Pedersen AH, Freshgard PO;
 XX DR WPI; 2002-489875/52.
 XX FT Novel conjugate useful for treating or preventing septic shock, stroke
 FT and myocardial infarction, comprises non-polypeptide group covalently
 FT attached to protein C polypeptide comprising an attachment group.
 XX PS Claim 9; Page; 92pp; English.
 XX The invention relates to a conjugate (I) comprising at least one non-
 CC polypeptide moiety (II) (e.g. an N-glycosyl group) covalently attached to
 CC a protein C polypeptide comprising an amino acid sequence which differs
 CC from that of a parent protein C polypeptide (III) in at least one
 CC introduced and/or at least one removed amino acid residue comprising an
 CC attachment group for the non-polypeptide group (e.g. an N-glycosylation
 CC site). Also included are (I) a variant (IV) of (III) comprising a
 CC substitution in a position (P) where (P) is an amino acid with at least
 CC 25% of its side group exposed to the surface, with the proviso that the
 CC substitution is not Thr245Ser/Ala/His/Lys/Arg/Asn/Asp/Glu/Gly/Gln,
 CC Tyr325Ser/Ala/Thr/His/Lys/Arg/Asn/Asp/Glu/Gln or Phe316Ser/Ala/Thr/
 CC His/Lys/Arg/Asn/Asp/Glu/Gly/Gln; (2) a nucleotide sequence (V) encoding
 CC (IV); (3) an expression vector (VI) comprising (V); (4) a host cell (VII)
 CC comprising (V) or (VI); (5) increasing (M2) the functional in vivo half-
 CC life or the serum half-life of a parent protein C polypeptide. The
 CC conjugates, variants and protein C proteins are useful as medicaments,
 CC and in the manufacture of medicaments for the treatment (and
 CC diagnosis/prevention) of stroke, myocardial infarction, after venous
 CC thrombosis, disseminated intravascular coagulation (DIC), sepsis, septic
 CC shock, emboli e.g. pulmonary emboli, transplantation such as bone marrow
 CC transplantation, burns, pregnancy, major surgery/trauma or adult
 CC respiratory distress syndrome (ARDS). The variant protein C has an
 CC increased resistance to activation by e.g. human plasma and alpha-1
 CC antitrypsin. The conjugates have an increased in vivo half-life,
 CC increased serum half-life, increased resistance to inhibitors, reduced
 CC renal clearance, reduced immunogenicity and/or increased bioavailability.
 CC The conjugate offers a number of advantages over the currently available
 CC APC products, including longer duration between injections,
 CC administration of less protein, and fewer side effects. Moreover, a
 CC reduced anticoagulant activity is beneficial to reduce the risk of
 CC bleeding while maintaining the anti-inflammatory activity of APC
 CC (activated protein C) conjugates. This must be especially important when
 CC the conjugate has an extended plasma life. The gene for protein C is
 CC located on chromosome 2q13-q14. The present sequence represents a zymogen
 CC protein C variant of the invention. Note: The present sequence is not
 CC shown in the specification but was created by the indexer using the
 CC protein C sequence appearing as AAU99002 and the information in claim 9
 XX
 XX Sequence 419 AA:
 Query Match 99.5%; Score 2312; DB 5; Length 419;
 Best Local Similarity 99.5%; Pred. No. 1.8e-142;
 Matches 417; Conservative 0; Mismatches 2; Indels 0; Gaps 0;

QY 1 ANSFLBELRHSSLERECEIEICDEFEAKELFQNVDDTLAFMSKVDGQCLVLPLEHPCA 60
 Db 1 ANSFLBELRHSSLERECEIEICDEFEAKELFQNVDDTLAFMSKVDGQCLVLPLEHPCA 60
 QY 61 SLICQGHGTCIDIGISPCDCRSQWGRPCQREVSFLNCSLNGGCTHYCLEEYGMRCSC 120
 Db 61 SLICQGHGTCIDIGISPCDCRSQWGRPCQREVSFLNCSLNGGCTHYCLEEYGMRCSC 120
 QY 121 AEGYVLGDDLLQCHPVPKPCGRPMKGMKKRSHLRDTEQDEQVDPRLIDGKMTRRGD 180
 Db 121 AEGYVLGDDLLQCHPVPKPCGRPMKGMKKRSHLRDTEQDEQVDPRLIDGKMTRRGD 180
 QY 181 SPWQVLLDSKKKLACGAVLHPSPVLTAAACMDESKLLVRLGEYDLRERWEELDDI 240
 Db 181 SPWQVLLDSKKKLACGAVLHPSPVLTAAACMDESKLLVRLGEYDLRERWEELDDI 240
 QY 241 KEVFNHPVSKSTTDNDMLHLAQPATLSQITVPICLPDSGLAERLDAQGETLVTVGM 300
 Db 241 KEVFNHPVSKSTTDNDMLHLAQPATLSQITVPICLPDSGLAERLDAQGETLVTVGM 300
 QY 301 GYHSSREKAKRNTFVLFNFKIPVPHNCSRWMSNMVSENMLCAGILGRDQACRGS 360
 Db 301 GYHSSREKAKRNTFVLFNFKIPVPHNCSRWMSNMVSENMLCAGILGRDQACRGS 360
 QY 361 GGPVWASFHGTWELVGLVSMWEGCGLLNHYGYTVKXSRITLMIGHIIRDXKAPQKSMAP 419
 Db 361 GGPVWASFHGTWELVGLVSMWEGCGLLNHYGYTVKXSRITLMIGHIIRDXKAPQKSMAP 419
 RESULT 108
 AAU99086
 ID AAU99086 standard; protein; 419 AA.
 XX
 AC AAU99086;
 XX
 DT 23-AUG-2002 (first entry)
 XX
 DE Human Protein C zymogen protein mutant E357N/D359T.
 XX
 KW Human: Protein C; N-glycosylation; APC; activated protein C; zymogen;
 KW serum half-life; chromosome 2q13-q14; stroke; myocardial infarction;
 KW after venous thrombosis; disseminated intravascular coagulation; DIC;
 KW sepsis; septic shock; embolism; pulmonary embolism; burn; pregnancy;
 KW bone marrow transplantation; major surgery; trauma; ARDS; coagulant;
 KW adult respiratory distress syndrome; alpha-1 antitrypsin; mutant; mutein.
 XX
 OS Homo sapiens.
 XX
 OS Synthetic.
 XX
 FH Key Location/qualifiers
 FT 1..155
 FT /label= light_chain
 FT Peptide 156..157
 FT /label= Lys_Arg_dipeptide
 FT Protein 158..419
 FT /label= Heavy_chain
 FT Peptide 158..169
 FT /label= Activation_peptide
 FT Misc-difference 357
 FT /note= "Wild-type Glu substituted by Asn"
 FT Misc-difference 359 /note= "Wild-type Asp substituted by Thr"
 FT
 XX WO200232461-A2.
 XX PD 25-APR-2002.
 XX PF 15-OCT-2001; 2001WO-DK000679.
 XX PR 18-OCT-2000; 2000DK-00001560.
 XX PR 18-OCT-2000; 2000US-0242268P.
 XX PR 21-JUN-2001; 2001DK-00000970.
 XX PR 21-JUN-2001; 2001US-0300154P.

XX (MAXY-) MAXYGEN APS.
 PA (MAXY-) MAXYGEN HOLDINGS LTD.
 XX
 PI Andersen KV, Pedersen AH, Freshgaard PO;
 DR WPI; 2002-489875/52.
 XX
 PT Novel conjugate useful for treating or preventing septic shock, stroke
 PT and myocardial infarction, comprises non-polypeptide group covalently
 PT attached to protein C polypeptide comprising an attachment group.
 XX
 PS Claim 9; Page; 92pp; English.
 XX
 CC The invention relates to a conjugate (I) comprising at least one non-
 CC polypeptide moiety (II) (e.g. an N-glycosyl group) covalently attached to
 CC a protein C polypeptide comprising an amino acid sequence which differs
 CC from that of a parent protein C polypeptide (III) in at least one
 CC introduced and/or at least one removed amino acid residue comprising an
 CC attachment group for the non-polypeptide group (e.g. an N-glycosylation
 CC site). Also included are (1) a variant (IV) of (III) comprising a
 CC substitution in a position (P) where (P) is an amino acid with at least
 CC 25% of its side group exposed to the surface, with the proviso that the
 CC substitution is not Thr245Ser/Ala/His/Lys/Arg/Asn/Asp/Glu/Gly/Gln/
 CC Tyr302Ser/Ala/Thr/His/Lys/Arg/Asn/Asp/Glu/Gly/Gln or Phe316Ser/Ala/Thr/
 CC His/Lys/Arg/Asn/Asp/Glu/Gly/Gln; (2) a nucleotide sequence (V) encoding
 CC (IV); (3) an expression vector (VI) comprising (V); (4) a host cell (VII)
 CC comprising (V) or (VI); (5) increasing (M2) the functional in vivo half-
 CC life or the serum half-life of a parent protein C polypeptide. The
 CC conjugates, variants and protein C proteins are useful as medicaments,
 CC and in the manufacture of medicaments for the treatment (and
 CC diagnosis/prevention) of stroke, myocardial infarction, after venous
 CC thrombosis, disseminated intravascular coagulation (DIC), sepsis, septic
 CC shock, emboli e.g. pulmonary emboli, transplantation such as bone marrow
 CC transplantation, burns, pregnancy, major surgery/trauma or adult
 CC respiratory distress syndrome (ARDS). The variant protein C has an
 CC increased resistance to activation by e.g. human plasma and alpha-1
 CC antitrypsin. The conjugates have an increased in vivo half-life,
 CC increased serum half-life, increased resistance to inhibitors, reduced
 CC renal clearance, reduced immunogenicity and/or increased bioavailability.
 CC The conjugate offers a number of advantages over the currently available
 CC APC products, including longer duration between injections,
 CC administration of less protein, and fewer side effects. Moreover, a
 CC reduced anticoagulant activity is beneficial to reduce the risk of
 CC bleeding while maintaining the antiinflammatory activity of APC
 CC (activated protein C) conjugates. This must be especially important when
 CC the conjugate has an extended plasma life. The gene for protein C is
 CC located on chromosome 2q13-q14. The present sequence represents a zymogen
 CC protein C variant of the invention. Note: The present sequence is not
 CC shown in the specification but was created by the indexer using the
 CC protein C sequence appearing as AAU99002 and the information in claim 9
 CC
 SQ Sequence 419 AA;
 Query Match 99.5%; Score 2312; DB 5; Length 419;
 Best Local Similarity 99.5%; Pred. No. 1,86-142;
 Matches 417; Conservative 0; Mismatches 2; Indels 0; Gaps 0;

QY 241 KEVFAHNSYSTNDNDIALHQAQATLSQTVIPICLPDSCGLARELNOAGQETLVSM 300
 DB 241 KEVFAHNSYSTNDNDIALHQAQATLSQTVIPICLPDSCGLARELNOAGQETLVSM 300
 QY 301 GYHSSEKAEKRNRTFVLFNFIKIPVPHNECEVMSNMVSENNLCAGILADRDQACEGDS 360
 DB 301 GYHSSEKAEKRNRTFVLFNFIKIPVPHNECEVMSNMVSENNLCAGILADRDQACNGTS 360
 QY 361 GGMVASFHTGTFVLGVVSGEGCGLLNRYGVYTKYSRIYDWHGHTDKEAPQKSNAP 419
 DB 361 GGMVASFHTGTFVLGVVSGEGCGLLNRYGVYTKYSRIYDWHGHTDKEAPQKSNAP 419
 RESULT 109
 AAU99091
 ID AAU99091 standard; protein; 419 AA.
 XX
 AC AAU99091;
 XX
 DT 23-AUG-2002 (first entry)
 XX
 DE Human Protein C zymogen protein mutant L387N/N389S.
 XX
 KM Human; Protein C; N-glycosylation; APC; activated protein C; zymogen;
 KM serum half-life; chromosome 2q13-q14; stroke; myocardial infarction;
 KM after venous thrombosis; disseminated intravascular coagulation; DIC;
 KM sepsis; septic shock; embolism; pulmonary embolism; burn; pregnancy;
 KM bone marrow transplantation; major surgery; trauma; ARDS; coagulant;
 KM adult respiratory distress syndrome; alpha-1 antitrypsin; mutant; mutlein.
 XX
 OS Homo sapiens.
 XX
 PH Synthetic.
 XX
 PH Key Location/Qualifiers
 FT Protein 1..155
 FT /label= Light_chain
 FT Peptide 156..157
 FT /label= Lys_Arg_dipeptide
 FT Protein 158..419
 FT /label= Heavy_chain
 FT Peptide 158..169
 FT /label= Activation_peptide
 FT Misc-difference 387
 PT /note= "Wild-type Leu substituted by Asn"
 PT Misc-difference 389
 PT /note= "Wild-type Asn substituted by Ser"
 XX
 FN W0200232461-A2.
 XX
 PD 25-APR-2002.
 XX
 PF 15-OCT-2001; 2001WO-DX000679.
 XX
 PR 18-OCT-2000; 2000DK-00001560.
 PR 18-OCT-2000; 2000US-0242268P.
 PR 21-JUN-2001; 2001DK-00000970.
 PR 21-JUN-2001; 2001US-0300154P.
 XX
 PA (MAXY-) MAXYGEN APS.
 PA (MAXY-) MAXYGEN HOLDINGS LTD.
 PI Andersen KV, Pedersen AH, Freshgaard PO;
 DR WPI; 2002-489875/52.
 XX
 PT Novel conjugate useful for treating or preventing septic shock, stroke
 PT and myocardial infarction, comprises non-polypeptide group covalently
 PT attached to protein C polypeptide comprising an attachment group.
 XX
 PS Claim 9; Page; 92pp; English.
 XX
 CC The invention relates to a conjugate (I) comprising at least one non-

CC and in the manufacture of medicaments for the treatment (and
 CC diagnosis/prevention) of stroke, myocardial infarction, after venous
 CC thrombosis, disseminated intravascular coagulation (DIC), sepsis, septic
 CC shock, emboli e.g. pulmonary emboli, transplantation such as bone marrow
 CC transplantation, burns, pregnancy, major surgery/trauma or adult
 CC respiratory distress syndrome (ARDS). The variant protein C has an
 CC increased resistance to activation by e.g. human plasma and alpha-1
 CC antitrypsin. The conjugates have an increased in vivo half-life,
 CC increased serum half-life, increased resistance to inhibitors, reduced
 CC renal clearance, reduced immunogenicity and/or increased bioavailability.
 CC The conjugate offers a number of advantages over the currently available
 CC APC products, including longer duration between injections,
 CC administration of less protein, and fewer side effects. Moreover, a
 CC reduced anticoagulant activity is beneficial to reduce the risk of
 CC bleeding while maintaining the antiinflammatory activity of APC
 CC (activated protein C) conjugates. This must be especially important when
 CC the conjugate has an extended plasma life. The gene for protein C is
 CC located on chromosome 2q13-q14. The present sequence represents a zymogen
 CC protein C variant of the invention. Note: The present sequence is not
 CC shown in the specification but was created by the indexer using the
 CC protein C sequence appearing as AAU99026 and the information in claim 9
 XX

Sequence 419 AA:

Query Match 99.5%; Score 2312; DB 5; Length 419;
 Best Local Similarity 99.5%; Pred. No. 1.8e-142;
 Matches 417; Conservative 1; Mismatches 1; Indels 0; Gaps 0;

QY 1 ANSTLEELHSSLEEECEELCPFEAKKIPQNDPLTAPMSAHVDSQCIVLPIHPQA 60
 DB 1 ANSTLEELHSSLEEECEELCPFEAKKIPQNDPLTAPMSAHVDSQCIVLPIHPQA 60
 QY 61 SLCCGATCIDIGISFSGDCRSGMEGRFCQREVSFLNCSLDNGGCTHCTLEEVGMRCSG 120
 DB 61 SLCCGATCIDIGISFSGDCRSGMEGRFCQREVSFLNCSLDNGGCTHCTLEEVGMRCSG 120
 QY 61 SLCCGATCIDIGISFSGDCRSGMEGRFCQREVSFLNCSLDNGGCTHCTLEEVGMRCSG 120
 DB 61 SLCCGATCIDIGISFSGDCRSGMEGRFCQREVSFLNCSLDNGGCTHCTLEEVGMRCSG 120
 QY 121 APGKLGDDLLQCHPAVFPQGRPMWRMEKRSKHKDQTDQDQVDRLLIDKMTRRGD 180
 DB 121 APGKLGDDLLQCHPAVFPQGRPMWRMEKRSKHKDQTDQDQVDRLLIDKMTRRGD 180
 QY 121 APGKLGDDLLQCHPAVFPQGRPMWRMEKRSKHKDQTDQDQVDRLLIDKMTRRGD 180
 DB 121 APGKLGDDLLQCHPAVFPQGRPMWRMEKRSKHKDQTDQDQVDRLLIDKMTRRGD 180
 QY 181 SPWQVVLDSKKKALACAVLIHPSWLTPAHOMESKLLVRLGEVDLRRMEKELDLDI 240
 DB 181 SPWQVVLDSKKKALACAVLIHPSWLTPAHOMESKLLVRLGEVDLRRMEKELDLDI 240
 QY 241 KEVVEPNYSKSTNDIALHAPATLSQTTVPICLPSGLAEELNAGQETVLTG 300
 DB 241 KEVVEPNYSKSTNDIALHAPATLSQTTVPICLPSGLAEELNAGQETVLTG 300
 QY 301 GYHSREKAKNRRFTVNFYKTPVPHNECEVMSNVSENNLCGLISGRDACEGDS 360
 DB 301 GYHSREKAKNRRFTVNFYKTPVPHNECEVMSNVSENNLCGLISGRDACEGDS 360
 QY 361 GSPVVASFHGTWFLVGLVSMGEGGLAHNYGYTTSRYLDMTHGHIDKRAPOKSNAP 419
 DB 361 GSPVVASFHGTWFLVGLVSMGEGGLAHNYGYTTSRYLDMTHGHIDKRAPOKSNAP 419

RESULT 111

AAU99026 standard; protein; 419 AA.

AC AAU99026;
 DT 23-AUG-2002 (first entry)
 XX Human Protein C zymogen protein mutant L220N/R222T.
 DE Human; Protein C; N-glycosylation; APC; activated protein C; zymogen;
 KM serum half-life; chromosome 2q13-q14; stroke; myocardial infarction;
 KM after venous thrombosis; disseminated intravascular coagulation; DIC;
 KM sepsis; septic shock; embolism; pulmonary embolism; burn; pregnancy;
 KM bone marrow transplantation; major surgery; trauma; ARDS; coagulant;
 KM adult respiratory distress syndrome; alpha-1 antitrypsin; mutant; mutein.

XX Homo sapiens.
 OS Synthetic.
 XX Key Location/Qualifiers
 FH 1.155
 FT /label= Light_chain
 FT 156..157
 FT /label= Lys_Arg_dipeptide
 FT 158..419
 FT /label= Heavy_chain
 FT 158..169
 FT Peptide /label= Activation_peptide
 FT MISC-difference 220
 FT /note= "Wild-type Leu substituted by Asn"
 FT MISC-difference 222
 FT /note= "Wild-type Arg substituted by Thr"
 PD MO200232461-A2.
 PD 25-APR-2002.
 PP 15-OCT-2001; 2001WC-DK000679.
 PP 18-OCT-2000; 2000DK-00001560.
 PR 18-OCT-2000; 2000US-0242268P.
 PR 21-JUN-2001; 2001DK-00000970.
 PR 21-JUN-2001; 2001US-0300154P.
 PA (MAXY-) MAXYGEN ABS.
 PA (MAXY-) MAXYGEN HOLDINGS LTD.
 PI Andersen KV, Pedersen AH, Freaekgaard PO;
 WPI; 2002-489875/52.
 XX Novel conjugate useful for treating or preventing septic shock, stroke
 PT and myocardial infarction, comprises non-polypeptide group covalently
 PT attached to protein C polypeptide comprising an attachment group.
 XX
 BS Claim 9; Page: 92pp; English.
 CC The invention relates to a conjugate (I) comprising at least one non-
 CC polypeptide moiety (II) (e.g. an N-glycosyl group) covalently attached to
 CC a protein C polypeptide comprising an amino acid sequence which differs
 CC from that of a parent protein C polypeptide (III) in at least one
 CC introduced and/or at least one removed amino acid residue comprising an
 CC attachment group for the non-polypeptide group (e.g. an N-glycosylation
 CC site). Also included are (I) a variant (IV) of (III) comprising a
 CC substitution in a position (P) where (P) is an amino acid with at least
 CC 25% of its side group exposed to the surface, with the proviso that the
 CC substitution is not Thr245Ser/Ala/His/Lys/Arg/Asn/Asp/Glu/Gly/Gln,
 CC Tyr302Ser/Ala/Thr/His/Lys/Arg/Asn/Asp/Glu/Gly/Gln or Ile316Ser/Ala/Thr/
 CC His/Lys/Arg/Asn/Asp/Glu/Gly/Gln; (2) a nucleotide sequence (V) encoding
 CC (IV); (3) an expression vector (VI) comprising (V); (4) a host cell (VII)
 CC comprising (V) or (VI); (5) increasing (M2) the functional in vivo half-
 CC life or the serum half-life of a parent protein C polypeptide. The
 CC conjugates, variants and protein C proteins are useful as medicaments,
 CC and in the manufacture of medicaments for the treatment (and
 CC diagnosis/prevention) of stroke, myocardial infarction, after venous
 CC thrombosis, disseminated intravascular coagulation (DIC), sepsis, septic
 CC shock, emboli e.g. pulmonary emboli, transplantation such as bone marrow
 CC transplantation, burns, pregnancy, major surgery/trauma or adult
 CC respiratory distress syndrome (ARDS). The variant protein C has an
 CC increased resistance to activation by e.g. human plasma and alpha-1
 CC antitrypsin. The conjugates have an increased in vivo half-life,
 CC increased serum half-life, increased resistance to inhibitors, reduced
 CC renal clearance, reduced immunogenicity and/or increased bioavailability.
 CC The conjugate offers a number of advantages over the currently available
 CC APC products, including longer duration between injections. Moreover, a
 CC administration of less protein, and fewer side effects. Moreover, a
 CC reduced anticoagulant activity is beneficial to reduce the risk of
 CC bleeding while maintaining the antiinflammatory activity of APC

CC (activated protein C) conjugates. This must be especially important when
 CC the conjugate has an extended plasma life. The gene for protein C is
 CC located on chromosome 2q13-q14. The present sequence represents a zymogen
 CC protein C variant of the invention. Note: The present sequence is not
 CC shown in the specification but was created by the indexer using the
 CC protein C sequence appearing as AA099002 and the information in claim 9
 XX
 XX Sequence 419 AA;

Query Match 99.4%; Score 2311; DB 5; Length 419;
 Best Local Similarity 99.5%; Pred. No. 2.1e-142;

Matches 417; Conservative 0; Mismatches 2; Indels 0; Gaps 0;

QY 1 ANSFLELRHSLSERCEIEICDFEAKETFOVNDTLAFSKVADGOCVLPLEPCA 60
 DB 1 ANSFLELRHSLSERCEIEICDFEAKETFOVNDTLAFSKVADGOCVLPLEPCA 60
 QY 61 SLCCGHTCTCIDIGSPSCDCRSWGEGPCQREVSFLNCSLONQ3CTHYCLEEVRRCSC 120
 DB 61 SLCCGHTCTCIDIGSPSCDCRSWGEGPCQREVSFLNCSLONQ3CTHYCLEEVRRCSC 120
 QY 121 APGYKLGDDLLQCHPAVMPGCRPMKMKKSHKRTEDQDQVDPPLIDGMYTTRRD 180
 DB 121 APGYKLGDDLLQCHPAVMPGCRPMKMKKSHKRTEDQDQVDPPLIDGMYTTRRD 180
 QY 181 SPMQVLLDSSKKLACGAVLHPSPVLTAAHQMDSKLTANTLGEYDLRMEKWELEDDI 240
 DB 181 SPMQVLLDSSKKLACGAVLHPSPVLTAAHQMDSKLTANTLGEYDLRMEKWELEDDI 240
 QY 241 KEVYHNPYKSTTTNDIALHLAQPAITLSQITVYICLPDSGLAEELINQAGETLVTW 300
 DB 241 KEVYHNPYKSTTTNDIALHLAQPAITLSQITVYICLPDSGLAEELINQAGETLVTW 300
 QY 301 GYHSSREKAKRRTFVNFIFKIPVPHNEGSEWNNVSNMMLCGILLGRONACGDS 360
 DB 301 GYHSSREKAKRRTFVNFIFKIPVPHNEGSEWNNVSNMMLCGILLGRONACGDS 360
 QY 361 GGPWVASFHGTWFLVGLVSWGEGCGLLANNVGYTVTSYSLDWHGHIRDKAPQSNAP 419
 DB 361 GGPWVASFHGTWFLVGLVSWGEGCGLLANNVGYTVTSYSLDWHGHIRDKAPQSNAP 419

RESULT 112

AAU99027 standard; protein; 419 AA.

AAU99027;

23-AUG-2002 (first entry)

Human Protein C zymogen protein mutant V243N/V245S.

Human: Protein C; N-glycosylation; APC; activated protein C; zymogen;
 KM serum half-life; chromosome 2q13-q14; stroke; myocardial infarction;
 KM atherosclerosis; disseminated intravascular coagulation; DIC;
 KM sepsis; septic shock; embolism; pulmonary embolism; pregnancy;
 KM bone marrow transplantation; major surgery; trauma; ARDS; conjugate;
 KM adult respiratory distress syndrome; alpha-1 antitrypsin; mutant; uretin.

Homo sapiens.
 OS Synthetic.

Key Location/Qualifiers

FT 1.155

FT /label= Light_chain

FT /label=157

FT /label= Lys_Arg_dipeptide

FT /label= Heavy_chain

FT /label=159

FT /label= Activation_peptide

FT /note= "Wild-type Val substituted by Asn"

FT Misc-difference 245 /note= "Wild-type Val substituted by Ser"

FT W0200232461-A2.

PD 25-APR-2002.

PF 15-OCT-2001; 2001MO-DK000679.

PR 18-OCT-2000; 2000DK-00001560.

PR 18-OCT-2000; 2000US-0242268P.

PR 21-JUN-2001; 2001DK-00000970.

PR 21-JUN-2001; 2001US-0300154P.

PA (MAXY-) MAXYGEN ARS.

PI (MAXY-) MAXYGEN HOLDINGS LTD.

PI Andersen KV, Pedersen AH, Friesgaard PO,

DR WPI; 2002-489675/52.

PT Novel conjugate useful for treating or preventing septic shock, stroke

PT and myocardial infarction, comprises non-polypeptide group covalently

PT attached to protein C polypeptide comprising an attachment group.

PS Claim 9; Page; 92pp; English.

The invention relates to a conjugate (I) comprising at least one non-polypeptide moiety (II) (e.g. an N-glycosyl group) covalently attached to a protein C polypeptide comprising an amino acid sequence which differs from that of a parent protein C polypeptide (III) in at least one introduced and/or at least one removed amino acid residue comprising an attachment group for the non-polypeptide group (e.g. an N-glycosylation site). Also included are (I) a variant (IV) of (III) comprising a substitution in a position (P) where (P) is an amino acid with at least 25% of its side group exposed to the surface, with the proviso that the substitution is not Thr245Ser/Ala/His/Lys/Arg/Asn/Asp/Glu/Gln, Tyr303Ser/Ala/Thr/His/Lys/Arg/Asn/Asp/Glu/Gln or Phe316Ser/Ala/Thr/His/Lys/Arg/Asn/Asp/Glu/Gln; (2) a nucleotide sequence (V) encoding (IV); (3) an expression vector (VI) comprising (V); (4) a host cell (VII) comprising (V) or (VI); (5) increasing (M2) the functional in vivo half-life or the serum half-life of a parent protein C polypeptide. The conjugates, variants and protein C proteins are useful as medicaments, and in the manufacture of medicaments for the treatment (and diagnosis/prevention) of stroke, myocardial infarction, after venous thrombosis, disseminated intravascular coagulation (DIC), sepsis, septic shock, emboli e.g. pulmonary emboli, transplantation such as bone marrow transplantation, burns, pregnancy, major surgery/trauma or adult respiratory distress syndrome (ARDS). The variant protein C has an increased resistance to activation by e.g. human plasma and alpha-1 antitrypsin. The conjugates have an increased in vivo half-life, increased serum half-life, increased resistance to inhibitors, reduced renal clearance, reduced immunogenicity and/or increased bioavailability. The conjugate offers a number of advantages over the currently available APC products, including longer duration between injections, administration of less protein, and fewer side effects. Moreover, a reduced anticoagulant activity is beneficial to reduce the risk of bleeding while maintaining the anti-inflammatory activity of APC (activated protein C) conjugates. This must be especially important when the conjugate has an extended plasma life. The gene for protein C is located on chromosome 2q13-q14. The present sequence represents a zymogen protein C variant of the invention. Note: The present sequence is not shown in the specification but was created by the indexer using the protein C sequence appearing as AAU99002 and the information in claim 9

XX Sequence 419 AA;

Query Match 99.4%; Score 2311; DB 5; Length 419;

Best Local Similarity 99.5%; Pred. No. 2.1e-142;

Matches 417; Conservative 0; Mismatches 2; Indels 0; Gaps 0;

QY 1 ANSFLELRHSLSERCEIEICDFEAKETFOVNDTLAFSKVADGOCVLPLEPCA 60

|||||

Db 1 ANSFLELRHSSLERECIEBICDFEAKEIFONVDPTLAFMSKVDGQCLVPLEHPCA 60
 QY 61 SLCCGHTCIDIGISFSCDCRSGBGRFCQREVSFLNCSLMDGGCTHYCLEEYGRRCSC 120
 Db 61 SLCCGHTCIDIGISFSCDCRSGBGRFCQREVSFLNCSLMDGGCTHYCLEEYGRRCSC 120
 QY 121 APGYKLGDDLLQCHPAVPCGPRPMKEKRSLSLRDDEDEDQVDPRLIDGKTRRGD 180
 Db 121 APGYKLGDDLLQCHPAVPCGPRPMKEKRSLSLRDDEDEDQVDPRLIDGKTRRGD 180
 QY 181 SPQVYVLDSSKKKLACGAVLIHPSVLTAAHCDSESKLVLRLGEYDLRREKWEJLDLI 240
 Db 181 SPQVYVLDSSKKKLACGAVLIHPSVLTAAHCDSESKLVLRLGEYDLRREKWEJLDLI 240
 QY 241 KEVYVHPNYSKSTTDNDIALHLAQPATLSQTYPICLPDGSLARELNQAGETLVYGM 300
 Db 241 KEVYVHPNYSKSTTDNDIALHLAQPATLSQTYPICLPDGSLARELNQAGETLVYGM 300
 QY 301 GHYSREKEAKRNRTFVLFNFIKLPVPHNECEVMSNMVSENLCAQILGDRQACGDS 360
 Db 301 GHYSREKEAKRNRTFVLFNFIKLPVPHNECEVMSNMVSENLCAQILGDRQACGDS 360
 QY 361 GGPMYASFHGTWFLVGLVSGSCGLNNGVATTKYSRLIMTHGHRDREAPQKSWAP 419
 Db 361 GGPMYASFHGTWFLVGLVSGSCGLNNGVATTKYSRLIMTHGHRDREAPQKSWAP 419

RESULT 113
 AAU99025
 ID AAU99025 standard; protein: 419 AA.
 AC AAU99025;
 XX
 XX 23-AUG-2002 (first entry)
 DT
 DE Human Protein C zymogen protein mutant L220N/R222S.
 XX
 XX Human; Protein C; N-glycosylation; APC; activated protein C; zymogen;
 KM serum half-life; chromosome 2q13-q14; stroke; myocardial infarction;
 KM after venous thrombosis; disseminated intravascular coagulation; DIC;
 KM sepsis; septic shock; embolism; pulmonary embolism; burn; pregnancy;
 KM bone marrow transplantation; major surgery; trauma; ARDS; coagulant;
 KM adult respiratory distress syndrome; alpha-1 antitrypsin; mutant; mutein.
 XX
 OS Homo sapiens.
 OS Synthetic.
 XX
 FH Key Location/Qualifiers
 FT Protein 1..155
 FT Peptide /label= Light_chain
 FT Peptide /label= Lys_Arg_dipeptide
 FT Protein 158..419
 FT Peptide /label= Heavy_chain
 FT Peptide 158..169
 FT /label= Activation_peptide
 FT Misc-difference 220
 FT /note= "Wild-type Leu substituted by Asn"
 FT FT Misc-difference 222
 FT /note= "Wild-type Arg substituted by Ser"
 XX
 PN WO200232461-A2.
 XX
 PD 25-APR-2002.
 XX
 PD 15-OCT-2001; 2001MO-DK000679.
 XX
 PR 18-OCT-2000; 2000DX-00001560.
 PR 18-OCT-2000; 2000US-024268P.
 PR 21-JUN-2001; 2001DX-00000970.
 PR 21-JUN-2001; 2001US-0300154P.
 XX
 PA (MAXY-) MAXYGEN APS.

PA (MAXY-) MAXYGEN HOLDINGS LTD.
 XX
 PI Andersen KV, Pedersen AH, Friesgaard PO;
 XX
 DR WPI; 2002-469875/52.
 XX
 PT Novel conjugate useful for treating or preventing septic shock, stroke
 PT and myocardial infarction, comprises non-polypeptide group covalently
 PT attached to protein C polypeptide comprising an attachment group.
 XX
 PS Claim 9; Page; 92pp; English.
 XX
 CC The invention relates to a conjugate (I) comprising at least one non-
 CC polypeptide moiety (II) (e.g. an N-glycosyl group) covalently attached to
 CC a protein C polypeptide comprising an amino acid sequence which differs
 CC from that of a parent protein C polypeptide (III) in at least one
 CC introduced and/or at least one removed amino acid residue comprising an
 CC attachment group for the non-polypeptide group (e.g. an N-glycosylation
 CC site). Also included are (1) a variant (IV) of (III) comprising a
 CC substitution in a position (P) where (P) is an amino acid with at least
 CC 25% of its side group exposed to the surface, with the proviso that the
 CC substitution is not Thr245Ser/Ala/His/Lys/Arg/Asn/Asp/Glu/Gly/Gln/Thr/
 CC Tyr303Ser/Ala/Thr/His/Lys/Arg/Asn/Asp/Glu/Gly/Gln or Phe315Ser/Ala/Thr/
 CC His/Lys/Arg/Asn/Asp/Glu/Gly/Gln; (2) a nucleotide sequence (V) encoding
 CC (IV); (3) an expression vector (VI) comprising (V); (4) a host cell (VII)
 CC comprising (V) or (VI); (5) increasing (M2) the functional in vivo half-
 CC life or the serum half-life of a parent protein C polypeptide. The
 CC conjugates, variants and protein C proteins are useful as medicaments,
 CC and in the manufacture of medicaments for the treatment (and
 CC diagnosis/prevention) of stroke, myocardial infarction, after venous
 CC thrombosis, disseminated intravascular coagulation (DIC), sepsis, septic
 CC shock, emboli e.g. pulmonary emboli, transplantation such as bone marrow
 CC transplantation, burns, pregnancy, major surgery/trauma or adult
 CC respiratory distress syndrome (ARDS). The variant protein C has an
 CC increased resistance to activation by e.g. human plasma and alpha-1
 CC antitrypsin. The conjugates have an increased in vivo half-life,
 CC increased serum half-life, increased resistance to inhibitors, reduced
 CC renal clearance, reduced immunogenicity and/or increased bioavailability.
 CC The conjugate offers a number of advantages over the currently available
 CC APC products, including longer duration between injections,
 CC administration of less protein, and fewer side effects. Moreover, a
 CC reduced anticoagulant activity is beneficial to reduce the risk of
 CC bleeding while maintaining the antiinflammatory activity of APC
 CC (activated protein C) conjugates. This must be especially important when
 CC the conjugate has an extended plasma life. The gene for protein C is
 CC located on chromosome 2q13-q14. The present sequence represents a zymogen
 CC protein C variant of the invention. Note: The present sequence is not
 CC shown in the specification but was created by the indexer using the
 CC protein C sequence appearing as AAU99025 and the information in claim 9
 XX
 SQ Sequence 419 AA;
 Query Match 99.4%; Score 2311; DB 5; Length 419;
 Best Local Similarity 99.5%; Pred. No. 2,1e-142;
 Matches 417; Conservative 0; Mismatches 2; Indels 0; Gaps 0;

QY 1 ANSFLELRHSSLERECIEBICDFEAKEIFONVDPTLAFMSKVDGQCLVPLEHPCA 60
 Db 1 ANSFLELRHSSLERECIEBICDFEAKEIFONVDPTLAFMSKVDGQCLVPLEHPCA 60
 QY 61 SLCCGHTCIDIGISFSCDCRSGBGRFCQREVSFLNCSLMDGGCTHYCLEEYGRRCSC 120
 Db 61 SLCCGHTCIDIGISFSCDCRSGBGRFCQREVSFLNCSLMDGGCTHYCLEEYGRRCSC 120
 QY 121 APGYKLGDDLLQCHPAVPCGPRPMKEKRSLSLRDDEDEDQVDPRLIDGKTRRGD 180
 Db 121 APGYKLGDDLLQCHPAVPCGPRPMKEKRSLSLRDDEDEDQVDPRLIDGKTRRGD 180
 QY 181 SPQVYVLDSSKKKLACGAVLIHPSVLTAAHCDSESKLVLRLGEYDLRREKWEJLDLI 240
 Db 181 SPQVYVLDSSKKKLACGAVLIHPSVLTAAHCDSESKLVLRLGEYDLRREKWEJLDLI 240
 QY 241 KEVYVHPNYSKSTTDNDIALHLAQPATLSQTYPICLPDGSLARELNQAGETLVYGM 300

Db 241 KEVFAHPNYSKSTTDDIALHLAQPATLSQITVPLCLPDSGLARELNQAGQETLVGM 300
QY 301 GYHSREKEAKRNRTFVNLFIKIPVPHNECESEWMSNVMSCAGILGDRQACBGDS 360
Db 301 GYHSREKEAKRNRTFVNLFIKIPVPHNECESEWMSNVMSCAGILGDRQACBGDS 360
QY 361 GGPWVASFHGTWFLVGLVSMGCGGLAHNVGYTTKSRYLDMIGHIRDKXAPQKSNAP 419
Db 361 GGPWVASFHGTWFLVGLVSMGCGGLAHNVGYTTKSRYLDMIGHIRDKXAPQKSNAP 419

RESULT 114
AAU99079
ID AAU99079 standard; protein; 419 AA.
XX
AC AAU99079;
XX
DT 23-AUG-2002 (first entry)
XX
DE Human Protein C zymogen protein mutant L349N/D351S.
XX
KM Human; Protein C; N-glycosylation; APC; activated protein C; zymogen;
KM serum half-life; chromosome 2q13-q14; stroke; myocardial infarction;
KM after venous thrombosis; disseminated intravascular coagulation; DIC;
KM sepsis; septic shock; embolism; pulmonary embolism; burn; pregnancy;
KM bone marrow transplantation; major surgery; trauma; ARDS; coagulant;
KM adult respiratory distress syndrome; alpha-1 antitrypsin; mutant; mutein.
XX
OS Homo sapiens.
OS Synthetic.
FH Key
FH Protein 1. .155
FT Location/Qualifiers
FT Peptide 156. .157
FT /label= Light_chain
FT Protein 158. .419
FT /label= Lys_Arg_dipeptide
FT Peptide 158. .169
FT /label= Heavy_chain
FT /label= Activation_peptide
FT Misc-difference 349
FT /note= "Wild-type Ieu substituted by Asn"
FT Misc-difference 351
FT /note= "Wild-type Asp substituted by Ser"
XX
PV W0200232461-A2.
XX
PD 25-APR-2002.
XX
PF 15-OCT-2001; 2001WO-DK000679.
XX
PR 18-OCT-2000; 2000DK-00001560.
XX
PR 18-OCT-2000; 2000US-0242268P.
PR 21-JUN-2001; 2001DK-00000970.
PR 21-JUN-2001; 2001US-0300154P.
XX
PA (MAXY-) MAXYGEN APS.
PA (MAXY-) MAXYGEN HOLDINGS LTD.
XX
PI Andersen KV, Pedersen AH, Friesgaard PO;
XX
DR WPL; 2002-489875/52.
XX
PT Novel conjugate useful for treating or preventing septic shock, stroke
PT and myocardial infarction, comprises non-polypeptide group covalently
PT attached to protein C polypeptide comprising an attachment group.
XX
PS Claim 9; Page; 92pp; English.
XX
CC The invention relates to a conjugate (I) comprising at least one non-
CC polypeptide moiety (II) (e.g. an N-glycosyl group) covalently attached to
CC a protein C polypeptide comprising an amino acid sequence which differs

CC introduced and/or at least one removed amino acid residue comprising an
CC attachment group for the non-polypeptide group (e.g. an N-glycosylation
CC site). Also included are (1) a variant (IV) of (III) comprising a
CC substitution in a position (P) where (P) is an amino acid with at least
CC 25% of its side group exposed to the surface, with the proviso that the
CC substitution is not Thr245Ser/Ala/His/Lys/Arg/Asn/Asp/Glu/Gly/Gln,
CC Tyr303Ser/Ala/Thr/His/Lys/Arg/Asn/Asp/Glu/Gly/Gln or Phe318Ser/Ala/Thr/
CC His/Lys/Arg/Asn/Asp/Glu/Gly/Gln; (2) a nucleotide sequence (V) encoding
CC (IV); (3) an expression vector (VI) comprising (V); (4) a host cell (VII)
CC comprising (V) or (VI); (5) increasing (W2) the functional in vivo half-
CC life or the serum half-life of a parent protein C polypeptide. The
CC conjugates, variants and protein C proteins are useful as medicaments,
CC and in the manufacture of medicaments for the treatment (and
CC diagnosis/prevention) of stroke, myocardial infarction, after venous
CC thrombosis, disseminated intravascular coagulation (DIC), sepsis, septic
CC shock, emboli e.g. pulmonary emboli, transplantation such as bone marrow
CC transplantation, burns, pregnancy, major surgery/trauma or adult
CC respiratory distress syndrome (ARDS). The variant protein C has an
CC increased resistance to activation by e.g. human plasma and alpha-1
CC antitrypsin. The conjugates have an increased in vivo half-life,
CC increased serum half-life, increased resistance to inhibitors, reduced
CC renal clearance, reduced immunogenicity and/or increased bioavailability.
CC The conjugate offers a number of advantages over the currently available
CC APC products, including longer duration between infections,
CC administration of less protein, and fewer side effects. Moreover, a
CC reduced anticoagulant activity is beneficial to reduce the risk of
CC bleeding while maintaining the anti-inflammatory activity of APC
CC (activated protein C) conjugates. This must be especially important when
CC the conjugate has an extended plasma life. The gene for protein C is
CC located on chromosome 2q13-q14. The present sequence represents a zymogen
CC protein C variant of the invention. Note: The present sequence is not
CC shown in the specification but was created by the indexer using the
CC protein C sequence appearing as AAU99002 and the information in claim 9
XX
SQ Sequence 419 AA;
XX
Query Match 99.4%; Score 2311; DB 5; Length 419;
Best Local Similarity 99.5%; Pred. No. 2,1e-142;
Matches 417; Conservative 0; Mismatches 2; Indels 0; Gaps 0;
QY 1 ANSFLEELRHSLSERECIEICDFEAKETIFQVDDTLAFMSKIVDQCLVPLEHPCA 60
Db 1 ANSFLEELRHSLSERECIEICDFEAKETIFQVDDTLAFMSKIVDQCLVPLEHPCA 60
QY 61 SLCCGHTCIDIGSGSCDCRSGWRFCOREVSPFNSLNGGCTYACLEFGWRRSC 120
Db 61 SLCCGHTCIDIGSGSCDCRSGWRFCOREVSPFNSLNGGCTYACLEFGWRRSC 120
QY 121 AFGYKLGDDLLQCHPAVKPCGRFPKMEKKRSHLRDTEDEQVDPRLIDSKMTRRD 180
Db 121 AFGYKLGDDLLQCHPAVKPCGRFPKMEKKRSHLRDTEDEQVDPRLIDSKMTRRD 180
QY 121 AFGYKLGDDLLQCHPAVKPCGRFPKMEKKRSHLRDTEDEQVDPRLIDSKMTRRD 180
Db 121 AFGYKLGDDLLQCHPAVKPCGRFPKMEKKRSHLRDTEDEQVDPRLIDSKMTRRD 180
QY 181 SPQVVLIDSKKLAGAVLHPSWTLTAHCWDESKLLVLAGHYLRKMEWELDDI 240
Db 181 SPQVVLIDSKKLAGAVLHPSWTLTAHCWDESKLLVLAGHYLRKMEWELDDI 240
QY 181 SPQVVLIDSKKLAGAVLHPSWTLTAHCWDESKLLVLAGHYLRKMEWELDDI 240
Db 181 SPQVVLIDSKKLAGAVLHPSWTLTAHCWDESKLLVLAGHYLRKMEWELDDI 240
QY 241 KEVFAHPNYSKSTTDDIALHLAQPATLSQITVPLCLPDSGLARELNQAGQETLVGM 300
Db 241 KEVFAHPNYSKSTTDDIALHLAQPATLSQITVPLCLPDSGLARELNQAGQETLVGM 300
QY 301 GYHSREKEAKRNRTFVNLFIKIPVPHNECESEWMSNVMSCAGILGDRQACBGDS 360
Db 301 GYHSREKEAKRNRTFVNLFIKIPVPHNECESEWMSNVMSCAGILGDRQACBGDS 360
QY 361 GGPWVASFHGTWFLVGLVSMGCGGLAHNVGYTTKSRYLDMIGHIRDKXAPQKSNAP 419
Db 361 GGPWVASFHGTWFLVGLVSMGCGGLAHNVGYTTKSRYLDMIGHIRDKXAPQKSNAP 419

RESULT 115
AAU99077
ID AAU99077 standard; protein; 419 AA.

XX AC AAU99077;
 XX 23-AUG-2002 (first entry)
 DT Human Protein C zymogen protein mutant I348N/G350S.
 XX
 DE Human; Protein C; N-glycosylation; APC; activated protein C; zymogen;
 KM serum half-life; chromosome 2q13-q14; stroke; myocardial infarction;
 KM after venous thrombosis; disseminated intravascular coagulation; DIC;
 KM sepsis; septic shock; embolism; pulmonary embolism; burn; pregnancy;
 KM bone marrow transplantation; major surgery; trauma; ARDS; coagulant;
 KM adult respiratory distress syndrome; alpha-1 antitrypsin; mutant; mutein.
 XX
 OS Homo sapiens.
 XX Synthetic.
 FH Key Location/Qualifiers
 FT Protein 1..155
 FT Peptide /label= Light_chain
 FT /label= Lys_Arg_dipeptide
 FT Protein 158..419
 FT Peptide /label= Heavy_chain
 FT /label= 158..169
 FT /label= Activation_peptide
 FT Misc-difference 348 /note= "Wild-type Ile substituted by Asn"
 FT /note= "Wild-type Gly substituted by Ser"
 FT Misc-difference 350 /note= "Wild-type Gly substituted by Ser"
 PN WO200232461-A2.
 PD 25-APR-2002.
 XX
 PF 15-OCT-2001; 2001MO-DK000679.
 XX
 PR 18-OCT-2000; 2000DK-00001560.
 PR 18-OCT-2000; 2000US-0242268P.
 PR 21-JUN-2001; 2001DK-00000970.
 PR 21-JUN-2001; 2001US-0300154P.
 XX
 PA [MAXY-] MAXYGEN APS.
 PA [MAXY-] MAXYGEN HOLDINGS LTD.
 XX
 PI Andersen KV, Pedersen AH, Freaugaard PO;
 XX MPI; 2002-489875/52.
 DR
 XX
 PT Novel conjugate useful for treating or preventing septic shock, stroke
 PT and myocardial infarction, comprises non-polypeptide group covalently
 PT attached to protein C polypeptide comprising an attachment group.
 XX
 PS Claim 9; Page; 92pp; English.

CC thrombosis, disseminated intravascular coagulation (DIC), sepsis, septic
 CC shock, emboli e.g. pulmonary emboli, transplantation such as bone marrow
 CC transplantation, burns, pregnancy, major surgery/trauma or adult
 CC respiratory distress syndrome (ARDS). The variant protein C has an
 CC increased resistance to activation by e.g. human plasma and alpha-1
 CC antitrypsin. The conjugates have an increased in vivo half-life,
 CC increased serum half-life, increased resistance to inhibitors, reduced
 CC renal clearance, reduced immunogenicity and/or increased bioavailability.
 CC The conjugate offers a number of advantages over the currently available
 CC APC products, including longer duration between injections,
 CC administration of less protein, and fewer side effects. Moreover, a
 CC reduced anticoagulant activity is beneficial to reduce the risk of
 CC bleeding while maintaining the anti-inflammatory activity of APC
 CC (activated protein C) conjugates. This must be especially important when
 CC the conjugate has an extended plasma life. The gene for protein C is
 CC located on chromosome 2q13-q14. The present sequence represents a zymogen
 CC protein C variant of the invention. Note: The present sequence is not
 CC shown in the specification but was created by the indexer using the
 CC protein C sequence appearing as AAU99002 and the information in claim 9
 XX
 SO Sequence 419 AA.
 Query Match 99.4%; Score 2311; DB 5; Length 419;
 Best Local Similarity 99.5%; Pred. No. 2.1e-142;
 Matches 417; Conservative 0; Mismatches 2; Indels 0; Gaps 0;
 QY 1 ANSFLERHSSLEPCIERICDPEEAKRIFONDPLAFMSHYDQCVLPLEHPCA 60
 DB 1 ANSFLERHSSLEPCIERICDPEEAKRIFONDPLAFMSHYDQCVLPLEHPCA 60
 QY 61 SLCCGHTCIDIGISGSCDCRSGMEGRFCQREVSFLNCSIDNGGCTHYCTLEVGMRRCSC 120
 DB 61 SLCCGHTCIDIGISGSCDCRSGMEGRFCQREVSFLNCSIDNGGCTHYCTLEVGMRRCSC 120
 QY 121 APGKLGDDLLQCHPAVPECGRPWKRMKKRSHIKRDTEDQEDQVDPRLIDGMRTRGD 180
 DB 121 APGKLGDDLLQCHPAVPECGRPWKRMKKRSHIKRDTEDQEDQVDPRLIDGMRTRGD 180
 QY 181 SPWQVVLVDSKKKACGAVLHPGMYLTAHCOMBSKKLIVRAGEYDLRRMKWELDLDI 240
 DB 181 SPWQVVLVDSKKKACGAVLHPGMYLTAHCOMBSKKLIVRAGEYDLRRMKWELDLDI 240
 QY 241 KEVFEHPNYSKSTTNDIALHLAOPALLSOTVPICLDPSGLAEELNQAQSLTIVGW 300
 DB 241 KEVFEHPNYSKSTTNDIALHLAOPALLSOTVPICLDPSGLAEELNQAQSLTIVGW 300
 QY 301 GYHSSREKREKRRTPVNFYKIPVYVPHNEGCEVSWNSSEMLCKGILGRORACRGS 360
 DB 301 GYHSSREKREKRRTPVNFYKIPVYVPHNEGCEVSWNSSEMLCKGILGRORACRGS 360
 QY 361 GGNVAVAFHQTWFLVGLVSMGEGGGLAHVGYTVVSRYLDMTHIRDKAPQKSWAP 419
 DB 361 GGNVAVAFHQTWFLVGLVSMGEGGGLAHVGYTVVSRYLDMTHIRDKAPQKSWAP 419
 RESULT 116
 AAU99092
 ID AAU99092 standard; protein; 419 AA.
 XX
 AC AAU99092;
 DT 23-AUG-2002 (first entry)
 XX
 DE Human Protein C zymogen protein mutant I348N/N349T.
 KM Human; Protein C; N-glycosylation; APC; activated protein C; zymogen;
 KM serum half-life; chromosome 2q13-q14; stroke; myocardial infarction;
 KM after venous thrombosis; disseminated intravascular coagulation; DIC;
 KM sepsis; septic shock; embolism; pulmonary embolism; burn; pregnancy;
 KM bone marrow transplantation; major surgery; trauma; ARDS; coagulant;
 KM adult respiratory distress syndrome; alpha-1 antitrypsin; mutant; mutein.
 XX
 OS Homo sapiens.

OS Synthetic.
 XX Key Location/Qualifiers
 FH Protein 1..155
 FT /label= Light_chain
 FT Peptide 156..157
 FT /label= Lys_Arg_dipeptide
 FT Protein 158..419
 FT /label= Heavy_chain
 FT Peptide 158..169
 FT /label= Activation_peptide
 FT Misc-difference 387
 FT /note= "Wild-type Ieu substituted by Asn"
 FT Misc-difference 389
 FT /note= "Wild-type Asn substituted by Thr"
 XX WC200232461-A2.
 XX 25-APR-2002.
 XX 15-OCT-2001; 2001MO-DK000679.
 XX 18-OCT-2000; 2000DK-00001560.
 XX 18-OCT-2000; 2000US-0242268P.
 XX 21-JUN-2001; 2001DK-00000970.
 XX 21-JUN-2001; 2001US-0300154P.
 XX (MAXY-) MAXYGEN APS.
 XX (MAXY-) MAXYGEN HOLDINGS LTD.
 XX Andersen KV, Pedersen AH, Friesgaard PO;
 DR WPI; 2002-489875/52.
 XX
 PT Novel conjugate useful for treating or preventing septic shock, stroke
 PT and myocardial infarction, comprises non-polypeptide group covalently
 PT attached to protein C polypeptide comprising an attachment group.
 XX
 PS Claim 9; Page; 92pp; English.

CC The invention relates to a conjugate (I) comprising at least one non-
 CC polypeptide moiety (II) (e.g. an N-glycosyl group) covalently attached to
 CC a protein C polypeptide comprising an amino acid sequence which differs
 CC from that of a parent protein C polypeptide (III) in at least one
 CC introduced and/or at least one removed amino acid residue comprising an
 CC attachment group for the non-polypeptide group (e.g. an N-glycosylation
 CC site). Also included are (1) a variant (IV) of (III) comprising a
 CC substitution in a position (P) where (P) is an amino acid with at least
 CC 25% of its side group exposed to the surface, with the proviso that the
 CC substitution is not Thr245Ser/Ala/His/Lys/Arg/Asp/Glu/Gly/Gln,
 CC Tyr302Ser/Ala/Thr/His/Lys/Arg/Asp/Glu/Gly/Gln or Phe316Ser/Ala/Thr/
 CC His/Lys/Arg/Asp/Asn/Glu/Gly/Gln; (2) a nucleotide sequence (V) encoding
 CC (IV); (3) an expression vector (VI) comprising (V); (4) a host cell (VII)
 CC comprising (V) or (VI); (5) increasing (W2) the functional in vivo half-
 CC life or the serum half-life of a parent protein C polypeptide. The
 CC conjugates, variants and protein C proteins are useful as medicaments,
 CC and in the manufacture of medicaments for the treatment (and
 CC diagnosis/prevention) of stroke, myocardial infarction, after venous
 CC thrombosis, disseminated intravascular coagulation (DIC), sepsis, septic
 CC shock, emboli e.g. pulmonary emboli, transplantation such as bone marrow
 CC transplantation, burns, pregnancy, major surgery/trauma or adult
 CC respiratory distress syndrome (ARDS). The variant protein C has an
 CC increased resistance to activation by e.g. human plasma and alpha-1
 CC antitrypsin. The conjugates have an increased in vivo half-life,
 CC increased serum half-life, increased resistance to inhibitors, reduced
 CC renal clearance, reduced immunogenicity and/or increased bioavailability.
 CC The conjugate offers a number of advantages over the currently available
 CC APC products, including longer duration between injections,
 CC administration of less protein, and fewer side effects. Moreover, a
 CC reduced anticoagulant activity is beneficial to reduce the risk of
 CC bleeding while maintaining the antiinflammatory activity of APC
 CC (activated protein C) conjugates. This must be especially important when
 CC the conjugate has an extended plasma life. The gene for protein C is

CC located on chromosome 2q13-q14. The present sequence represents a zymogen
 CC protein C variant of the invention. Note: The present sequence is not
 CC shown in the specification but was created by the indexer using the
 CC protein C sequence appearing as A099002 and the information in claim 9
 XX
 XX SQ Sequence 419 AA;
 Query Match 99.4%; Score 2311; DB 5; Length 419;
 Best Local Similarity 99.5%; Pred.No.2.1e-142;
 Matches 417; Conservative 0; Mismatches 2; Indels 0; Gaps 0;
 QY 1 ANSFLEELRHSLSRECEIEICDFFEAKEIFQVNDPTLAFMSKHDQCLVPLEPCA 60
 DB 1 ANSFLEELRHSLSRECEIEICDFFEAKEIFQVNDPTLAFMSKHDQCLVPLEPCA 60
 QY 61 SLCCGHTCTIDIGISFSCDCHSGWEGRFQREVSFLNCSLDNGCTHYCLEEVRRCSC 120
 DB 61 SLCCGHTCTIDIGISFSCDCHSGWEGRFQREVSFLNCSLDNGCTHYCLEEVRRCSC 120
 QY 121 APGYLADBDLQCHPAVKEPCGRPMKMEKRSKLRPTDQEDQVPRLLDGKTRRGD 180
 DB 121 APGYLADBDLQCHPAVKEPCGRPMKMEKRSKLRPTDQEDQVPRLLDGKTRRGD 180
 QY 181 SPMQVVLDSKKDLACAVLTHPSNVLTAAHCWDSKKLLVRLGEYDLRMEKWELELDI 240
 DB 181 SPMQVVLDSKKDLACAVLTHPSNVLTAAHCWDSKKLLVRLGEYDLRMEKWELELDI 240
 QY 241 KEVFPVHPYKSTTDDIALHLAQPTLSQTTVPCLPDSGLARLNDAQETLVYGV 300
 DB 241 KEVFPVHPYKSTTDDIALHLAQPTLSQTTVPCLPDSGLARLNDAQETLVYGV 300
 QY 301 GYHSREKEAKRRTVTNFIKIPVPEHNCSEVMSNVSNMTCAIIGDQDACEGDS 360
 DB 301 GYHSREKEAKRRTVTNFIKIPVPEHNCSEVMSNVSNMTCAIIGDQDACEGDS 360
 QY 361 GSPVWASFHGTWELVGLVSWEGCGLLANYGYTVVSRYLDMIGHIRLDEAPQSMAP 419
 DB 361 GSPVWASFHGTWELVGLVSWEGCGLLANYGYTVVSRYLDMIGHIRLDEAPQSMAP 419
 RESULT 117
 AAR62653
 ID AAR62653 standard; protein; 461 AA.
 AC AAR62653;
 XX
 DT 25-MAR-2003 (revised)
 DT 27-JUN-1995 (first entry)
 XX
 DE Human protein C.
 KW Human protein C; intravascular coagulation; deep vein thrombosis;
 KW pulmonary embolism; protein C deficiency.
 OS Homo sapiens.
 XX
 FH Key Location/Qualifiers
 FT Peptide 1..462
 FT /note= "pre-pro peptide"
 FT Peptide 43..211
 FT /note= "activation peptide"
 FT Region 97
 FT /label= glycosylation_site
 FT Misc-difference 181
 FT /note= "corresponding codon ACC"
 FT Protein 212..461
 FT /note= "activated protein C heavy chain"
 FT Region 229
 FT /label= glycosylation_site
 FT Region 248
 FT /label= glycosylation_site
 FT Region 313
 FT /label= glycosylation_site

```

XX PN US5358932-A.
XX XX
XX PD 25-OCT-1994.
XX XX
XX PF 23-SEP-1993; 93US-00126440.
XX XX
XX PR 29-DEC-1989; 89US-00458856.
XX PR 27-APR-1990; 90US-00515378.
XX PR 27-DEC-1990; 90US-00634988.
XX XX
XX PA (ZYMO ) ZYMOGENETICS INC.
XX XX
XX PI Holly RD, Foster DC;
XX XX
XX DR MPI, 1994-341028/42.
XX DR N-PSDB; AAQ72994.
XX XX
XX PT Modified human protein C molecules - esp. useful for treating coagulation
XX PT -related disorders such as Protein C deficiency or thrombosis, or for
XX PT promoting fibrinolysis.
XX XX
XX PS Example 1; Fig 1, 25pp; English.
XX XX
XX CC AAQ72994 encodes AAR6263 human protein C, from which the modified
XX CC protein C molecule described in AAR6263 is derived. The modified
XX CC molecule is useful in the treatment of conditions involving
XX CC intravascular coagulation, e.g. deep vein thrombosis and pulmonary
XX CC embolism. They may also be used in the treatment of inherited protein C
XX CC deficiency. The modified protein C has the advantage of increased
XX CC stability in plasma and thus a greater half-life compared to prepn. of
XX CC human protein C purified from plasma. (Updated on 25-MAR-2003 to correct
XX CC CF field.)
XX XX
SQ Sequence 461 AA;
Query Match 99.4%; Score 2311; DB 2; Length 461;
Best Local Similarity 99.5%; Pred. No. 2.3e-142;
Matches 417; Conservative 0; Mismatches 2; Indels 0; Gaps 0;
QY 1 ANSFLELRHSLSRECEIEICDPFEAKEIFQNVDTLAFKSKYVDGQCLVPLRHPCA 60
DB 43 ANSFLELRHSLSRECEIEICDPFEAKEIFQNVDTLAFKSKYVDGQCLVPLRHPCA 102
QY 61 SLCCGHGTCIDGIGSPFCDCRSQWGRFCQJREVSFLNCSLDNGGCTHYCLEEYGMRRSC 120
DB 103 SLCCGHGTCIDGIGSPFCDCRSQWGRFCQJREVSFLNCSLDNGGCTHYCLEEYGMRRSC 162
QY 121 APGYKLGDLLQCHPAVKFPCGTPMKMEKKRSHLRKDTEDQEDQVDFRLIDGKMTRRD 180
DB 163 APGYKLGDLLQCHPAVKFPCGTPMKMEKKRSHLRKDTEDQEDQVDFRLIDGKMTRRD 222
QY 181 SPQOVVLDSKKKLACAVLIHPSVLTAAHOMESKLLVNGYDLRAMEKRELDLI 240
DB 223 SPQOVVLDSKKKLACAVLIHPSVLTAAHOMESKLLVNGYDLRAMEKRELDLI 282
QY 241 KEVFVHNYSKSTNDNDIALHIAOPATLSOTIPICLPDSGLARELNDAQOETLVYGM 300
DB 283 KEVFVHNYSKSTNDNDIALHIAOPATLSOTIPICLPDSGLARELNDAQOETLVYGM 342
QY 301 GYSSSEKAKAKRNTFYLANITKIPYVHNESSEYMSNMYSNNLCAGILGRDACEGDS 360
DB 343 GYSSSEKAKAKRNTFYLANITKIPYVHNESSEYMSNMYSNNLCAGILGRDACEGDS 402
QY 361 GGPVVASFHGTFVLGVAVSWGSCGLNNYGVYKSKRYLMDVHGHRLDKKAPQKSWAP 419
DB 403 GGPVVASFHGTFVLGVAVSWGSCGLNNYGVYKSKRYLMDVHGHRLDKKAPQKSWAP 461

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RESULT 118
AAU99088
ID AAU99088 standard; protein: 419 AA.

```

AC AAU99088;
XX XX
XX DT 23-AUG-2002 (first entry)
XX XX
XX DE Human Protein C zymogen protein mutant G383N/G385T.
XX XX
XX KW Human; Protein C; N-glycosylation; APC; activated protein C; zymogen;
XX KW serum half-life; chromosome 2q14-q14; stroke; myocardial infarction;
XX KW after venous thrombosis; disseminated intravascular coagulation; DIC;
XX KW sepsis; septic shock; embolism; pulmonary embolism; burn; pregnancy;
XX KW bone marrow transplantation; major surgery; trauma; AIDS; coagulant;
XX KW adult respiratory distress syndrome; alpha-1 antitrypsin; mutant; mutein.
XX XX
XX OS Homo sapiens.
XX OS Synthetic.
XX XX
XX FH Key Location/Qualifiers
XX FH Protein 1..155
XX FH Peptide /label= Light_chain
XX FH 156..157
XX FH /label= Lys_Arg_dipeptide
XX FH Protein 158..419
XX FH Peptide /label= Heavy_chain
XX FH 158..169
XX FH /label= Activation_peptide
XX FH Misc-difference 383
XX FH /note= "Wild-type Gly substituted by Asn"
XX FH Misc-difference 385
XX FH /note= "Wild-type Gly substituted by Thr"
XX XX
XX PN WO200232461-A2.
XX XX
XX PD 25-APR-2002.
XX XX
XX PF 15-OCT-2001; 2001MO-DK000679.
XX XX
XX PR 18-OCT-2000; 2000DK-00001560.
XX PR 18-OCT-2000; 2000US-0242268P.
XX PR 21-JUN-2001; 2001DK-00000970.
XX PR 21-JUN-2001; 2001US-0300154P.
XX XX
XX PA (MAXY-) MAXYGEN APS.
XX PA (MAXY-) MAXYGEN HOLDINGS LTD.
XX XX
XX PI Andersen KV, Pedersen AH, Freegaard PO;
XX XX
XX DR MPI, 2002-489875/52.
XX XX
XX PT Novel conjugate useful for treating or preventing septic shock, stroke
XX PT and myocardial infarction, comprises non-polypeptide group covalently
XX PT attached to protein C polypeptide comprising an attachment group.
XX XX
XX PS Claim 9; Page; 92pp; English.
XX XX
XX CC The invention relates to a conjugate (I) comprising at least one non-
XX CC polypeptide moiety (II) (e.g. an N-glycosyl group) covalently attached to
XX CC a protein C polypeptide comprising an amino acid sequence which differs
XX CC from that of a parent protein C polypeptide (III) in at least one
XX CC introduced and/or at least one removed amino acid residue comprising an
XX CC attachment group for the non-polypeptide group (e.g. an N-glycosylation
XX CC site). Also included are (1) a variant (IV) of (III) comprising a
XX CC substitution in a position (P) where (P) is an amino acid with at least
XX CC 25% of its side group exposed to the surface, with the proviso that the
XX CC substitution is not Thr245Ser/Ala/His/Lys/Arg/Asn/Asp/Glu/Gly/Gln,
XX CC Tyr302Ser/Ala/Thr/His/Lys/Arg/Asn/Asp/Glu/Gln or Phe316Ser/Ala/Thr/
XX CC His/Lys/Arg/Asn/Asp/Glu/Gly/Gln; (2) a nucleotide sequence (V) encoding
XX CC (IV); (3) an expression vector (VI) comprising (V); (4) a host cell (VII)
XX CC comprising (V) or (VI); (5) increasing (W2) the functional in vivo half-
XX CC life of the serum half-life of a parent protein C polypeptide. The
XX CC conjugates, variants and protein C proteins are useful as medicaments,
XX CC and in the manufacture of medicaments for the treatment (and
XX CC diagnosis/prevention) of stroke, myocardial infarction, after venous
XX CC thrombosis, disseminated intravascular coagulation (DIC), sepsis, septic

```

Query Match	99.48;	Score 2310;	DB 5;	Length 419;
Best Local Similarity	99.58;	Pred. No. 2.5e-142;		
Matches 417; Conservative	0;	Mismatches 2;	Indels 0;	Gaps 0

RESULT 119
AAU99068
ID AAU99068 standard; protein; 419 AA

AC	AAU9068;
XX	
DT	23-AUG-2002 (first entry)
XX	
DE	Human Protein C zymogen protein mutant F316N/L318T.
XX	
KW	Human; Protein C; N-glycosylation; APC; activated protein C; zymogen;
KW	serum half-life; chromosome 2q13-q14; stroke; myocardial infarction;
KW	after-venous thrombosis; disseminated intravascular coagulation; DIC;
KW	sepsis; septic shock; embolism; pulmonary embolism; burn; pregnancy;
KW	Bone marrow transplantation; major surgery; trauma; AIDS; coagulant;
KW	adult respiratory distress syndrome; alpha-1 antitrypsin; mutant; mutein
XX	
CS	Homio sapiens.
CS	Synthetic.

FH	Key	Location/Qualifiers
FT	Protein	1..155
FT		/label= light chain
FT	Peptide	156..157
FT		/label= Lys_Arg_dipeptide
FT	Protein	158..419
FT		/label= Heavy_chain
FT	Peptide	158..169
FT		/label= Activation_peptide
FT	Misc-difference	316
FT		/note= "Wild-type Phe substituted by Asn"
FT	Misc-difference	318
FT		/note= "Wild-type Leu substituted by Thr"
XX		
PX	WC0200232461-A2.	
XX		
XD	25-APR-2002.	
FD		
FP	15-OCT-2001, 2001WO-DK00679.	
FX		
ER	18-OCT-2000; 2000DK-00001560.	
PR	18-OCT-2000; 2000US-0242268P.	
PR	21-JUN-2001; 2001DK-0000370.	
PR	21-JUN-2001; 2001US-0300154P.	
XX		
PA	(MAXY-) MAXYGEN APS.	
PA	(MAXY-) MAXYGEN HOLDINGS LTD.	
XI		
PI	Andersen KV, Pedersen AH, Freekgaard EO;	
XX	WPI, 2002-489875/52.	
XX		
PT	Novel conjugate useful for treating or preventing septic shock, stroke	
PT	and myocardial infarction, comprises non-polypeptide group covalently	
PT	attached to protein C polypeptide comprising an attachment group.	
PS		
XX	Claim 9, Page; 92pp; English.	
CC	The invention relates to a conjugate (I) comprising at least one non-	
CC	polypeptide moiety (II) (e.g. an N-glycosyl group) covalently attached to	
CC	a protein C polypeptide comprising an amino acid sequence which differs	
CC	from that of a parent protein C polypeptide (III) in at least one	
CC	introduced and/or at least one removed amino acid residue comprising an	
CC	attachment group for the non-polypeptide group (e.g. an N-glycosylation	
CC	site). Also included are (1) a variant (IV) of (III) comprising a	
CC	substitution in a position (P) where (P) is an amino acid with at least	
CC	2% of its side group exposed to the surface, with the proviso that the	
CC	substitution is not Thr24Ser/Ala/His/Lys/Arg/Asn/Asp/Glu/Gly/Gln,	
CC	Tyr302Ser/Ala/Thr/His/Lys/Arg/Asn/Asp/Glu/Gly/Gln or Phe316Ser/Ala/Thr/ His/Lys/Arg/Asn/Asp/Glu/Gly/Gln, (2) a nucleotide sequence (V) encoding (IV), (3) an expression vector (VI) comprising (V); (4) a host cell (VII)	
CC	comprising (V) or (VI); (5) increasing (M2) the functional in vivo half-	
CC	-life or the serum half-life of a parent protein C polypeptide. The	
CC	conjugates, variants and protein C proteins are useful as medicaments,	
CC	and in the manufacture of medicaments for the treatment (and	
CC	diagnosis/prevention) of stroke, myocardial infarction, after venous	
CC	thrombosis, disseminated intravascular coagulation (DIC), sepsis, septic	
CC	shock, emboli e.g. pulmonary emboli, transplantation such as bone marrow	
CC	transplantation, burns, pregnancy, major surgery/trauma or adult	
CC	respiratory distress syndrome (ARDS). The variant protein C has an	
CC	increased resistance to activation by e.g. human plasma and alpha-1	
CC	antitrypsin. The conjugates have an increased in vitro half-life,	
CC	increased serum half-life, increased resistant to inhibitors, reduced	
CC	renal clearance, reduced immunogenicity and/or increased bioavailability.	
CC	The conjugate offers a number of advantages over the currently available	
CC	APC products, including longer duration between injections,	
CC	administration of less protein, and fewer side effects. Moreover, a	
CC	reduced anticoagulant activity is beneficial to reduce the risk of	
CC	bleeding while maintaining the anti-inflammatory activity of APC	
CC	(activated protein C) conjugates. This must be especially important when	
CC	the conjugate has an extended plasma life. The gene for protein C is	
CC	located on chromosome 2q13-q14. The present sequence represents a zymogen	

CC protein C variant of the invention. Note: The present sequence is not
 CC shown in the specification but was created by the indexer using the
 CC protein C sequence appearing as AAU99002 and the information in claim 9
 XX
 SQ Sequence 419 AA;

Query Match 99.4%; Score 2310; DB 5; Length 419;
 Best Local Similarity 99.5%; Pred. No. 2.5e-142;
 Matches 417; Conservative 0; Mismatches 2; Indels 0; Gaps 0;

QY 1 ANSFLEELRHSSLERECIEBICDFEBAKEIFQNVDDTLAFMSKRVSDGQCLVPLEHPCA 60
 DB 1 ANSFLEELRHSSLERECIEBICDFEBAKEIFQNVDDTLAFMSKRVSDGQCLVPLEHPCA 60
 QY 61 SLCCGHTCTDIGSGSCDCRSWGFRPCQRYVFNCSLNDGCTHYCLEBYGMRSCC 120
 DB 61 SLCCGHTCTDIGSGSCDCRSWGFRPCQRYVFNCSLNDGCTHYCLEBYGMRSCC 120
 QY 121 APGYKLGDDLQCHPAVKFPCGRPMKMEKRSHTLKRDEDEQDVDPRLIDGKMTRRGD 180
 DB 121 APGYKLGDDLQCHPAVKFPCGRPMKMEKRSHTLKRDEDEQDVDPRLIDGKMTRRGD 180
 QY 181 SPQVVLDSKKKLAGCAVLIHPSVLTMAHCWDESKLIVRLGTYDLRMEXWELIDTI 240
 DB 181 SPQVVLDSKKKLAGCAVLIHPSVLTMAHCWDESKLIVRLGTYDLRMEXWELIDTI 240
 QY 241 KEVFEHPNTKSTTDNDIALHLAOPATISOTIVICLPDSGLARELNAGGETLVYGM 300
 DB 241 KEVFEHPNTKSTTDNDIALHLAOPATISOTIVICLPDSGLARELNAGGETLVYGM 300
 QY 301 GHSSREKAKRNRTFVLANFIKIPVPHNECSVMSVNSNNLCAGILGDRDQACBGDS 360
 DB 301 GHSSREKAKRNRTFVLANFIKIPVPHNECSVMSVNSNNLCAGILGDRDQACBGDS 360
 QY 361 GGPVVASFHGTWELVGLVMSGSCGLNHYGVTKYSRYDDVHGHRIKDEAPQKSMAP 419
 DB 361 GGPVVASFHGTWELVGLVMSGSCGLNHYGVTKYSRYDDVHGHRIKDEAPQKSMAP 419

RESULT 120

AAU99080
 ID AAU99080 standard; protein; 419 AA.

AC AAU99080;
 XX
 DT 23-AUG-2002 (first entry)
 XX

DE Human Protein C zymogen protein mutant L349N/D351T.

XX Human; Protein C; N-glycosylation; APC; activated protein C; zymogen;
 KW serum half-life; chromosome 2q13-q14; stroke; myocardial infarction;
 KW after venous thrombosis; disseminated intravascular coagulation; DIC;
 KW sepsis; septic shock; embolism; pulmonary embolism; burn; pregnancy;
 KW bone marrow transplantation; major surgery; trauma; AIDS; coagulant;
 KW adult respiratory distress syndrome; alpha-1 antitrypsin; mutant; mutein.

OS Homo sapiens.
 OS Synthetic.

XX Key
 FH Location/Qualifiers
 FT 1..155
 FT /label= Light_chain
 FT 156..157
 FT /label= Lys_Arg_dipeptide
 FT 158..419
 FT /label= Heavy_chain
 FT 158..169
 FT /label= Activation_peptide

FT Misc-difference 349
 FT /note= "Wild-type Leu substituted by Asn"
 FT 351
 FT Misc-difference 351
 FT /note= "Wild-type Asp substituted by Thr"

XX

PN WO200232461-A2.

XX 25-APR-2002.

PF 15-OCT-2001; 2001WO-DK00679.

PR 18-OCT-2000; 2000DK-00001560.

PR 18-OCT-2000; 2000US-0242268P.

PR 21-JUN-2001; 2001DK-00000970.

PR 21-JUN-2001; 2001US-0300154P.

PA (MAXY-) MAXYGEN APS.

PA (MAXY-) MAXYGEN HOLDINGS LTD.

PI Andersen KV, Pedersen AH, Frestgaard PO;

DR WPI; 2002-489875/52.

XX Novel conjugate useful for treating or preventing septic shock, stroke

PT and myocardial infarction, comprises non-polypeptide group covalently

PT attached to protein C polypeptide comprising an attachment group.

XX Claim 9; Page; 92pp; English.

XX The invention relates to a conjugate (I) comprising at least one non-

CC polypeptide moiety (II) (e.g. an N-glycosyl group) covalently attached to

CC a protein C polypeptide comprising an amino acid sequence which differs

CC from that of a parent protein C polypeptide (III) in at least one

CC introduced and/or at least one removed amino acid residue comprising an

CC attachment group for the non-polypeptide group (e.g. an N-glycosylation

CC site). Also included are (1) a variant (IV) of (III) comprising a

CC substitution in a position (P) where (P) is an amino acid with at least

CC 2% of its side group exposed to the surface, with the proviso that the

CC substitution is not Thr245Ser/Ala/His/Lys/Arg/Asn/Asp/Glu/Gly/Gln.

CC Tyr302Ser/Ala/Thr/His/Lys/Arg/Asn/Asp/Glu/Gly/Gln or Phe316Ser/Ala/Thr/

CC His/Lys/Arg/Asn/Asp/Glu/Gly/Gln; (2) a nucleotide sequence (V) encoding

CC (IV); (3) an expression vector (VI) comprising (V); (4) a host cell (VII)

CC comprising (V) or (VI); (5) increasing (M2) the functional in vivo half-

CC life or the serum half-life of a parent protein C polypeptide. The

CC conjugates, variants and protein C proteins are useful as medicaments,

CC and in the manufacture of medicaments for the treatment (and

CC diagnosis/prevention) of stroke, myocardial infarction, after venous

CC thrombosis, disseminated intravascular coagulation (DIC), sepsis, septic

CC shock, emboli e.g. pulmonary emboli, transplantation such as bone marrow

CC transplantation, burns, pregnancy, major surgery/trauma or adult

CC respiratory distress syndrome (ARDS). The variant protein C has an

CC increased resistance to activation by e.g. human plasma and alpha-1

CC antitrypsin. The conjugates have an increased in vivo half-life,

CC increased serum half-life, increased resistant to inhibitors, reduced

CC renal clearance, reduced immunogenicity and/or increased bioavailability.

CC The conjugate offers a number of advantages over the currently available

CC APC products, including longer duration between injections,

CC administration of less protein, and fewer side effects. Moreover, a

CC reduced anticoagulant activity is beneficial to reduce the risk of

CC bleeding while maintaining the antiinflammatory activity of APC

CC (activated protein C) conjugates. This must be especially important when

CC the conjugate has an extended plasma life. The gene for protein C is

CC located on chromosome 2q13-q14. The present sequence represents a zymogen

CC protein C variant of the invention. Note: The present sequence is not

CC shown in the specification but was created by the indexer using the

CC protein C sequence appearing as AAU99002 and the information in claim 9

CC
 XX

SQ Sequence 419 AA;

Query Match 99.4%; Score 2310; DB 5; Length 419;

Best Local Similarity 99.5%; Pred. No. 2.5e-142;

Matches 417; Conservative 0; Mismatches 2; Indels 0; Gaps 0;

QY 1 ANSFLEELRHSSLERECIEBICDFEBAKEIFQNVDDTLAFMSKRVSDGQCLVPLEHPCA 60
 DB 1 ANSFLEELRHSSLERECIEBICDFEBAKEIFQNVDDTLAFMSKRVSDGQCLVPLEHPCA 60
 QY 61 SLCCGHTCTDIGSGSCDCRSWGFRPCQRYVFNCSLNDGCTHYCLEBYGMRSCC 120

DB 61 SLCCGHTCIDIGSFSCDCRSGWGRFCQREVSFLNCSLDNGCTHYCLAEVGMRRCSG 120

QY 121 APGYKIGDILLQCHPAVKFPCGRPMKMKRSHLKDPTEDQDQVPRLLDGKMTRRGD 180

DB 121 APGYKIGDILLQCHPAVKFPCGRPMKMKRSHLKDPTEDQDQVPRLLDGKMTRRGD 180

QY 181 SPWQVLLDSKKKCLACGAVLIHPSWVLTAAHCDSESKKLVRLGEYDLRRMEKWELEDLI 240

DB 181 SPWQVLLDSKKKCLACGAVLIHPSWVLTAAHCDSESKKLVRLGEYDLRRMEKWELEDLI 240

QY 241 KEVFNHNSKSTTNDIALHLAQPATLSQITVPICLPDSGLAERELNAQOQETLVYGM 300

DB 241 KEVFNHNSKSTTNDIALHLAQPATLSQITVPICLPDSGLAERELNAQOQETLVYGM 300

QY 301 GYHSRREKAKNRFTVNFILKIPVPHNECEVSNMWSNNMLCAGILGDRQDACEGDS 360

DB 301 GYHSRREKAKNRFTVNFILKIPVPHNECEVSNMWSNNMLCAGILGDRQDACEGDS 360

QY 361 GGPWVASFHGTWFLVGLVSWGEGCGLIHNYGYTVKVSRYLDMHGHIRDKXAPQKSWAP 419

DB 361 GGPWVASFHGTWFLVGLVSWGEGCGLIHNYGYTVKVSRYLDMHGHIRDKXAPQKSWAP 419

RESULT 121

AAR13540

ID AAR13540 standard; protein; 461 AA.

AC AAR13540;

XX

DT 25-MAR-2003 (revised)

DT 09-JAN-2003 (revised)

DT 31-OCT-1991 (first entry)

XX

DE Human Protein C zymogen FLIN.

XX

KW HPC mutant; pro drug; intravascular coagulation; zymogen.

XX

OS Homo sapiens.

XX

PH Key Location/Qualifiers

FT Region 198..199

FT /label= Lys-Arg dipeptide

XX

PN EP443875-A.

XX

PD 28-AUG-1991.

XX

PF 22-FEB-1991; 91BP-00301450.

XX

PR 23-FEB-1990; 90US-00484133.

XX

PA (ELIL) LILLY & CO ELI.

XX

PI Gerlitz BE, Grinnell BW,

XX

DR WPI; 1991-25444/35.

XX

PT Recombinant mutants of human protein C - having aminoacid changes for

PT increased sensitivity to activation by thrombin and thrombin-

PT thrombomodulin complex.

XX

PS Claim 28; Page 37-38; 67pp; English.

XX

CC Protein C zymogen FLIN comprises a signal peptide and propeptide of a

CC gamma-carboxylated secreted protein, the light chain of HPC, a basic

CC dipeptide (i.e. Lys-Arg, but can also be Arg-Lys, Lys-Lys or Arg-Arg) and

CC amino acid residues 200-461 of HPC but with Asp(209) replaced by Phe and

CC Asp(214) replaced by Asn. The zymogen can be activated in vivo by

CC thrombin alone (even in the presence of calcium) and is more susceptible

CC to activation by thrombin/ thrombomodulin than native HPC zymogen.

CC Zymogen FLIN can be administered as a pro drug useful in prevention and

CC treatment of diseases involving intravascular coagulation. It can also be

CC given to thrombocytopenic patients with invasive cancers with effective

CC and intensive chemotherapy. See also AAR13537-9 and AAR13623. (Updated on

CC 09-JAN-2003 to add missing OS field.) (Updated on 25-MAR-2003 to correct

CC PA field.)

XX

SQ Sequence 461 AA:

Query Match 99.4%; Score 2310; DB 2; Length 461;

Best Local Similarity 99.5%; Pred. No. 2.7e-142;

Matches 417; Conservative 1; Mismatches 1; Indels 0; Gaps 0;

QY 1 ANSFLEELRHSLEECIEICDPEBAKEIFQNVDTLAFMSKHVDGQCLVPLEHPCA 60

DB 43 ANSFLEELRHSLEECIEICDPEBAKEIFQNVDTLAFMSKHVDGQCLVPLEHPCA 102

QY 61 SLCCGHTCIDIGSFSCDCRSGWGRFCQREVSFLNCSLDNGCTHYCLAEVGMRRCSG 120

DB 103 SLCCGHTCIDIGSFSCDCRSGWGRFCQREVSFLNCSLDNGCTHYCLAEVGMRRCSG 162

QY 121 APGYKIGDILLQCHPAVKFPCGRPMKMKRSHLKDPTEDQDQVPRLLDGKMTRRGD 180

DB 163 APGYKIGDILLQCHPAVKFPCGRPMKMKRSHLKDPTEDQDQVPRLLDGKMTRRGD 222

QY 181 SPWQVLLDSKKKCLACGAVLIHPSWVLTAAHCDSESKKLVRLGEYDLRRMEKWELEDLI 240

DB 223 SPWQVLLDSKKKCLACGAVLIHPSWVLTAAHCDSESKKLVRLGEYDLRRMEKWELEDLI 282

QY 241 KEVFNHNSKSTTNDIALHLAQPATLSQITVPICLPDSGLAERELNAQOQETLVYGM 300

DB 283 KEVFNHNSKSTTNDIALHLAQPATLSQITVPICLPDSGLAERELNAQOQETLVYGM 342

QY 301 GYHSRREKAKNRFTVNFILKIPVPHNECEVSNMWSNNMLCAGILGDRQDACEGDS 360

DB 343 GYHSRREKAKNRFTVNFILKIPVPHNECEVSNMWSNNMLCAGILGDRQDACEGDS 402

QY 361 GGPWVASFHGTWFLVGLVSWGEGCGLIHNYGYTVKVSRYLDMHGHIRDKXAPQKSWAP 419

DB 403 GGPWVASFHGTWFLVGLVSWGEGCGLIHNYGYTVKVSRYLDMHGHIRDKXAPQKSWAP 461

RESULT 122

AU099029

ID AU099029 standard; protein; 419 AA.

AC AU099029;

XX

DT 23-AUG-2002 (first entry)

XX

DE Human Protein C zymogen protein mutant V245N/P247S.

XX

KW Human; Protein C; N-glycosylation; APC; activated protein C; zymogen;

KW serum half-life; chromosome 2q13-q14; stroke; myocardial infarction;

KW after venous thrombosis; disseminated intravascular coagulation; DIC;

KW sepsis; septic shock; embolism; pulmonary embolism; burn; pregnancy;

KW bone marrow transplantation; major surgery; trauma; ARDS; coagulant;

KW adult respiratory distress syndrome; alpha-1 antitrypsin; mutant; mutain.

XX

OS Homo sapiens.

OS Synthetic.

XX

PH Key Location/Qualifiers

FT Protein 1..155

FT /label= Light_chain

FT Peptide 156..157

FT Protein 158..419

FT Peptide /label= Heavy_chain

FT /label= Activation_peptide

FT 245

FT Misc-difference /note= "Wild-type Val substituted by Asn"

FT 247

FT Misc-difference /note= "Wild-type Pro substituted by Ser"

XX PN W0200232461-A2.
 XX XX
 PD 25-APR-2002.
 XX XX
 PE 15-OCT-2001; 2001WO-DK000679.
 XX XX
 PR 18-OCT-2000; 2000DK-00001560.
 PR 18-OCT-2000; 2000US-0242268P.
 PR 21-JUN-2001; 2001DK-00000970.
 XX 21-JUN-2001; 2001US-0300154P.
 XX XX
 PA (MAXY-) MAXYGEN APS.
 PA (MAXY-) MAXYGEN HOLDINGS LTD.
 XX XX
 PI Andersen KV, Pedersen AH, Freskgaard PO;
 XX XX
 DR WPI; 2002-489875/52.
 XX XX
 PT Novel conjugate useful for treating or preventing septic shock, stroke
 PT and myocardial infarction, comprises non-polypeptide group covalently
 PT attached to protein C polypeptide comprising an attachment group.
 XX XX
 PS Claim 9; Page; 92pp; English.
 XX XX
 CC The invention relates to a conjugate (I) comprising at least one non-
 CC polypeptide moiety (II) (e.g. an N-glycosyl group) covalently attached to
 CC a protein C polypeptide comprising an amino acid sequence which differs
 CC from that of a parent protein C polypeptide (III) in at least one
 CC introduced and/or at least one removed amino acid residue comprising an
 CC attachment group for the non-polypeptide group (e.g. an N-glycosylation
 CC site). Also included are (1) a variant (IV) of (III) comprising a
 CC substitution in a position (P) where (P) is an amino acid with at least
 CC 25% of its side group exposed to the surface, with the proviso that the
 CC substitution is not Thr245Ser/Ala/His/His/Arg/Asn/Asp/Glu/Gly/Gln,
 CC Tyr30Ser/Ala/Thr/His/His/Arg/Asn/Asp/Glu/Gly/Gln or Phe15Ser/Ala/Thr/
 CC His/His/Arg/Asn/Asp/Glu/Gly/Gln; (2) a nucleotide sequence (V) encoding
 CC (IV); (3) an expression vector (VI) comprising (V); (4) a host cell (VII)
 CC comprising (V) or (VI); (5) increasing (M2) the functional in vivo half-
 CC life or the serum half-life of a parent protein C polypeptide. The
 CC conjugates, variants and protein C proteins are useful as medicaments,
 CC and in the manufacture of medicaments for the treatment (and
 CC diagnosis/prevention) of stroke, myocardial infarction, after venous
 CC thrombosis, disseminated intravascular coagulation (DIC), sepsis, septic
 CC shock, emboli e.g. pulmonary emboli, transplantation such as bone marrow
 CC transplantation, burns, pregnancy, major surgery/trauma or adult
 CC respiratory distress syndrome (ARDS). The variant protein C has an
 CC increased resistance to activation by e.g. human plasma and alpha-1
 CC antitrypsin. The conjugates have an increased in vivo half-life,
 CC increased serum half-life, increased resistance to inhibitors, reduced
 CC renal clearance, reduced immunogenicity and/or increased bioavailability.
 CC The conjugate offers a number of advantages over the currently available
 CC APC products, including longer duration between injections,
 CC administration of less protein, and fewer side effects. Moreover, a
 CC reduced anticoagulant activity is beneficial to reduce the risk of
 CC bleeding while maintaining the anti-inflammatory activity of APC
 CC (activated protein C) conjugates. This must be especially important when
 CC the conjugate has an extended plasma life. The gene for protein C is
 CC located on chromosome 2q13-q14. The present sequence represents a zymogen
 CC protein C variant of the invention. Note: The present sequence is not
 CC shown in the specification but was created by the indexer using the
 CC protein C sequence appearing as AAU99002 and the information in claim 9
 CC XX
 SQ Sequence 419 AA;
 XX XX
 Query March 99.44; Score 2309; DB 5; Length 419;
 Best Local Similarity 99.54; Pred. No. 2.9e-142;
 Matches 417; Conservative 0; Mismatches 2; Indels 0; Gaps 0;
 QY 1 ANSFLELHSSLSRECEIEICDPEFAKEIFONVDDTLAFWSKRVDSQCLVPLPHEPCA 60
 DB 1 ANSFLELHSSLSRECEIEICDPEFAKEIFONVDDTLAFWSKRVDSQCLVPLPHEPCA 60

QY 61 SLCCGHTCIDIGSGFSDCDRSGWEGRCOREVSLFNGSLDNGGCTHYCLEBYGWRCS 120
 DB 61 SLCCGHTCIDIGSGFSDCDRSGWEGRCOREVSLFNGSLDNGGCTHYCLEBYGWRCS 120
 QY 121 APGYKLGDLLQCHPAVKEPCGAPWKEKESRSHLKRDEDDVDVPRLLIDGKMTRRGD 180
 DB 121 APGYKLGDLLQCHPAVKEPCGAPWKEKESRSHLKRDEDDVDVPRLLIDGKMTRRGD 180
 QY 181 SPQWVLLDSKKKLACGAVLIHPSWLTAAACMD ESKLLVRLGEYD LRRBKKELDL 240
 DB 181 SPQWVLLDSKKKLACGAVLIHPSWLTAAACMD ESKLLVRLGEYD LRRBKKELDL 240
 QY 241 KEVFNPNYSKSTDDNDIALIHAOPATLSOTIPICLPDSGLAREBNQAGETLVYWG 300
 DB 241 KEVFNPNYSKSTDDNDIALIHAOPATLSOTIPICLPDSGLAREBNQAGETLVYWG 300
 QY 301 GYHSSEKEAKRNRTFYANFIKI PVVPHNECS EYWSNWSNNMLCAGILGRDACEGDS 360
 DB 301 GYHSSEKEAKRNRTFYANFIKI PVVPHNECS EYWSNWSNNMLCAGILGRDACEGDS 360
 QY 361 GGPVNASFHGTWFLVGLVSWGEGCLINNYGVYTKYSRYLDWIGHIDKRAAPQKSMAP 419
 DB 361 GGPVNASFHGTWFLVGLVSWGEGCLINNYGVYTKYSRYLDWIGHIDKRAAPQKSMAP 419
 RESULT 123
 AAU99030
 ID AAU99030 standard; protein; 419 AA.
 AC AAU99030;
 XX XX
 DT 23-AUG-2002 (first entry)
 XX XX
 DE Human Protein C zymogen protein mutant V245N/P247T.
 XX XX
 KM Human; Protein C; N-glycosylation; APC; activated protein C; zymogen;
 KM serum half-life; chromosome 2q13-q14; stroke; myocardial infarction;
 KM after venous thrombosis; disseminated intravascular coagulation; DIC;
 KM sepsis; septic shock; embolism; pulmonary embolism; burn; pregnancy;
 KM bone marrow transplantation; major surgery; trauma; ARDS; coagulant;
 KM adult respiratory distress syndrome; alpha-1 antitrypsin; mutant; mutein.
 XX XX
 OS Homo sapiens.
 OS Synthetic.
 XX XX
 FH Key
 FT Protein 1..355 Location/Qualifiers
 FT Peptide /label= Light_chain
 FT Peptide /label= Lys_Arg_dipeptide
 FT Protein 158..419
 FT Peptide /label= Heavy_chain
 FT Peptide 158..169
 FT Misc-difference 245 /label= Activation_peptide
 FT Misc-difference 245 /note= "Wild-type Val substituted by Asn"
 FT Misc-difference 247 /note= "Wild-type Pro substituted by Thr"
 XX XX
 PN W0200232461-A2.
 XX XX
 PD 25-APR-2002.
 XX XX
 PE 15-OCT-2001; 2001WO-DK000679.
 XX XX
 PR 18-OCT-2000; 2000DK-00001560.
 PR 18-OCT-2000; 2000US-0242268P.
 PR 21-JUN-2001; 2001DK-00000970.
 PR 21-JUN-2001; 2001US-0300154P.
 XX XX
 PA (MAXY-) MAXYGEN APS.
 PA (MAXY-) MAXYGEN HOLDINGS LTD.
 XX XX

FI Andersen KV, Pedersen AH, Freskgaard PO;
 XX
 DR WPI: 2002-489875/52.
 XX
 PT Novel conjugate useful for treating or preventing septic shock, stroke
 PT and myocardial infarction, comprises non-polypeptide group covalently
 PT attached to protein C polypeptide comprising an attachment group.
 XX
 PS Claim 9; Page; 92pp; English.
 XX
 CC The invention relates to a conjugate (I) comprising at least one non-
 CC polypeptide moiety (II) (e.g. an N-glycosyl group) covalently attached to
 CC a protein C polypeptide comprising an amino acid sequence which differs
 CC from that of a parent protein C polypeptide (III) in at least one
 CC introduced and/or at least one removed amino acid residue comprising an
 CC attachment group for the non-polypeptide group (e.g. an N-glycosylation
 CC site). Also included are (1) a variant (IV) of (III) comprising a
 CC substitution in a position (P) where (P) is an amino acid with at least
 CC 25% of its side group exposed to the surface, with the proviso that the
 CC substitution is not Thr245Ser/Ala/His/Lys/Arg/Asn/Asp/Glu/Gly/Gln,
 CC Tyr102Ser/Ala/Thr/His/Lys/Arg/Asn/Asp/Glu/Gly/Gln or Phe316Ser/Ala/Thr/
 CC His/Lys/Arg/Asn/Asp/Glu/Gly/Gln; (2) a nucleotide sequence (V) encoding
 CC (IV); (3) an expression vector (VI) comprising (V); (4) a host cell (VII)
 CC comprising (V) or (VI); (5) increasing (W2) the functional in vivo half-
 CC life or the serum half-life of a parent protein C polypeptide. The
 CC conjugates, variants and protein C proteins are useful as medicaments,
 CC and in the manufacture of medicaments for the treatment (and
 CC diagnosis/prevention) of stroke, myocardial infarction, after venous
 CC shock, emboli e.g. pulmonary emboli, transplantation such as bone marrow
 CC transplantation, burns, pregnancy, major surgery/trauma or adult
 CC respiratory distress syndrome (ARDS). The variant protein C has an
 CC increased resistance to activation by e.g. human plasma and alpha-1
 CC antitrypsin. The conjugates have an increased in vivo half-life,
 CC increased serum half-life, increased resistance to inhibitors, reduced
 CC renal clearance, reduced immunogenicity and/or increased bioavailability.
 CC The conjugate offers a number of advantages over the currently available
 CC APC products, including longer duration between injections,
 CC administration of less protein, and fewer side effects. Moreover, a
 CC reduced anticoagulant activity is beneficial to reduce the risk of
 CC bleeding while maintaining the antiinflammatory activity of APC
 CC (activated protein C) conjugates. This must be especially important when
 CC the conjugate has an extended plasma life. The gene for protein C is
 CC located on chromosome 2q13-q14. The present sequence represents a zymogen
 CC protein C variant of the invention. Note: The present sequence is not
 CC shown in the specification but was created by the indexer using the
 CC protein C sequence appearing as AAD99002 and the information in claim 9
 CC
 XX
 SQ Sequence 419 AA:
 Query Match 99.4%; Score 2309; DB 5; Length 419;
 Best Local Similarity 99.5%; Pred. No. 2,9e-142;
 Matches 417; Conservative 0; Mismatches 2; Indels 0; Gaps 0;

QY 301 GYHSREKAKRRPTVNLFIKIPVPHNECSRVSNVSNMLCAGILGDRQACBDS 360
 DB 301 GYHSREKAKRRPTVNLFIKIPVPHNECSRVSNVSNMLCAGILGDRQACBDS 360
 QY 361 GGFVVASFHGTWPLVGLVSWEGCGLLHNYGYTVTSRYLDWIGHIRPKKAPQKSNAP 419
 DB 361 GGFVVASFHGTWPLVGLVSWEGCGLLHNYGYTVTSRYLDWIGHIRPKKAPQKSNAP 419
 RESULT 124
 AAD99078
 ID AAD99078 standard; protein; 419 AA.
 AC AAD99078;
 XX 23-AUG-2002 (first entry)
 DE Human Protein C zymogen protein mutant I348N/G350T.
 XX
 XX Human; Protein C; N-glycosylation; APC; activated protein C; zymogen;
 KW serum half-life; chromosome 2q13-q14; stroke; myocardial infarction;
 KW after venous thrombosis; disseminated intravascular coagulation; DIC;
 KW sepsis; septic shock; embolism; pulmonary embolism; burn; pregnancy;
 KW bone marrow transplantation; major surgery; trauma; ARDS; coagulant;
 KW adult respiratory distress syndrome; alpha-1 antitrypsin; mutant; mutain.
 OS Homo sapiens.
 OS Synthetic.
 PH Key Location/Qualifiers
 FT Protein 1..155
 FT /label= Light_chain
 FT Peptide 156..157
 FT /label= Lys_Arg_dipeptide
 FT Protein 158..419
 FT /label= Heavy_chain
 FT Peptide 158..169
 FT /label= Activation_peptide
 FT Misc-difference 348
 FT /note= "Wild-type Ile substituted by Asn"
 FT Misc-difference 350
 FT /note= "Wild-type Gly substituted by Thr"
 PN W0200232461-A2.
 PD 25-APR-2002.
 XX
 PF 15-OCT-2001; 2001WO-DK000679.
 XX
 PR 18-OCT-2000; 2000DK-00001560.
 PR 18-OCT-2000; 2000US-0242268P.
 PR 21-JUN-2001; 2001DK-00000970.
 PR 21-JUN-2001; 2001US-0300154P.
 XX
 PA (MAXY-) MAXYGEN APS.
 PA (MAXY-) MAXYGEN HOLDINGS LTD.
 PI
 PI Andersen KV, Pedersen AH, Freskgaard PO;
 XX
 DR WPI: 2002-489875/52.
 XX
 PT Novel conjugate useful for treating or preventing septic shock, stroke
 PT and myocardial infarction, comprises non-polypeptide group covalently
 PT attached to protein C polypeptide comprising an attachment group.
 XX
 PS Claim 9; Page; 92pp; English.
 XX
 CC The invention relates to a conjugate (I) comprising at least one non-
 CC polypeptide moiety (II) (e.g. an N-glycosyl group) covalently attached to
 CC a protein C polypeptide comprising an amino acid sequence which differs
 CC from that of a parent protein C polypeptide (III) in at least one
 CC introduced and/or at least one removed amino acid residue comprising an

CC shown in the specification but was created by the indexer using the
CC protein C sequence appearing as AAU99002 and the information in claim 9
XX
XX Sequence 419 AA;

Query Match 99.3%; Score 2308; DB 5; Length 419;
Best Local Similarity 99.5%; Pred. No. 3.3e-142;
Matches 417; Conservative 1; Mismatches 1; Indels 0; Gaps 0;

QY 1 ANSFLELRHSLRECEIEICDPEEAKETFGVNDTLAFMSKAVDQCLVPLEHCA 60
DB 1 ANSFLELRHSLRECEIEICDPEEAKETFGVNDTLAFMSKAVDQCLVPLEHCA 60
QY 61 SLCCGHGTCIDIGSGSCDCRSWGGRFCQREVSFLNCSLNDGCTHYCLAEVGRRCSC 120
DB 61 SLCCGHGTCIDIGSGSCDCRSWGGRFCQREVSFLNCSLNDGCTHYCLAEVGRRCSC 120
QY 121 APGYKLGDLLQCHPAVKEPCGRPWKMEKKRSHLRDTEDEQVDPELLDKMTRRGD 180
DB 121 APGYKLGDLLQCHPAVKEPCGRPWKMEKKRSHLRDTEDEQVDPELLDKMTRRGD 180
QY 181 SPQVYVLDISKKLAAGAVLHPSVLTAAHCDSESKLVLHGEYDLRWEKMLDIT 240
DB 181 SPQVYVLDISKKLAAGAVLHPSVLTAAHCDSESKLVLHGEYDLRWEKMLDIT 240
QY 241 KEVYHNPYSKSTTDNDIALHLAQPATLSQTIYPICLPDSEARELINAQGETLVYGM 300
DB 241 KEVYHNPYSKSTTDNDIALHLAQPATLSQTIYPICLPDSEARELINAQGETLVYGM 300
QY 301 GYHSREKAKRNTFYVNFETIKIPVPHNECEVMSNMVSENMLCAGILDRQDACEGDS 360
DB 301 GYHSREKAKRNTFYVNFETIKIPVPHNECEVMSNMVSENMLCAGILDRQDACEGDS 360
QY 361 GGPVVASFHGTWFLVGLVSWBSCGLNNSGVYTKVSRVLDWIRHGRDREAPQSWAP 419
DB 361 GGPVVASFHGTWFLVGLVSWBSCGLNNSGVYTKVSRVLDWIRHGRDREAPQSWAP 419

RESULT 127
AAU99004
ID AAU99004 standard; protein; 419 AA.
XX
AC AAU99004;
XX
DT 23-AUG-2002 (first entry)
XX
DE Human Protein C zymogen protein mutant H388N/Y390T.
XX
KW Human; Protein C; N-glycosylation; APC; activated protein C; zymogen;
KW serum half-life; chromosome 2q13-q14; stroke; myocardial infarction;
KW after venous thrombosis; disseminated intravascular coagulation; DIC;
KW sepsis; septic shock; embolism; pulmonary embolism; burn; pregnancy;
KW bone marrow transplantation; major surgery; trauma; ARDS; coagulant;
KW adult respiratory distress syndrome; alpha-1 antitrypsin; mutant; muten.
XX
XX Homo sapiens.
OS Synthetic.
XX
FH Key Location/Qualifiers
FT Protein 1..155
FT Peptide /label= Light_chain
FT Peptide /label= Lys_Arg_diPeptide
FT Protein /label= Lys_Arg_diPeptide
FT Peptide /label= Heavy_chain
FT Peptide /label= Heavy_chain
FT Peptide /label= Activation_peptide
FT Misc-difference 388 /note= "Wild-type His substituted by Asn"
FT Misc-difference 390 /note= "Wild-type Tyr substituted by Thr"
XX
XX W020023461-A2.

XX
PD 25-APR-2002.
XX

XX 15-OCT-2001; 2001WO-DK00679.
XX

XX 18-OCT-2000; 2000DK-00001560.
XX

XX 18-OCT-2000; 2000US-0242268P.
XX

XX 21-JUN-2001; 2001DK-00000970.
XX

XX 21-JUN-2001; 2001US-0300154P.
XX

XX (MAXY-) MAXYGEN APS.
XX

XX (MAXY-) MAXYGEN HOLDINGS LTD.
XX

XX Andersen KV, Pedersen AH, Friesgaard PO;
XX

XX WPL 2002-489875/52.
XX

XX Claim 9; Page; 92pp; English.
XX

XX The invention relates to a conjugate (I) comprising at least one non-
XX

XX polypeptide moiety (II) (e.g. an N-glycosyl group) covalently attached to
XX

XX a protein C polypeptide comprising an amino acid sequence which differs
XX

XX from that of a parent protein C polypeptide (III) in at least one
XX

XX introduced and/or at least one removed amino acid residue comprising an
XX

XX attachment group for the non-polypeptide group (e.g. an N-glycosylation
XX

XX site). Also included are (I) a variant (IV) of (III) comprising a
XX

XX substitution in a position (p) where (p) is an amino acid with at least
XX

XX 25% of its side group exposed to the surface, with the proviso that the
XX

XX substitution is not Thr245Ser/Ala/His/Lys/Arg/Asn/Asp/Glu/Gly/Gln,
XX

XX Tyr302Ser/Ala/Thr/Lys/Arg/Asn/Asp/Glu/Gly/Gln or Phe316Ser/Ala/Thr/
XX

XX His/Lys/Arg/Asn/Asp/Glu/Gly/Gln; (2) a nucleotide sequence (V) encoding
XX

XX (IV); (3) an expression vector (VI) comprising (V); (4) a host cell (VII)
XX

XX comprising (V) or (VI); (5) increasing (M2) the functional in vivo half-
XX

XX life or the serum half-life of a parent protein C polypeptide. The
XX

XX conjugates, variants and protein C proteins are useful as medicaments,
XX

XX and in the manufacture of medicaments for the treatment (and
XX

XX diagnosis/prevention) of stroke, myocardial infarction, after venous
XX

XX thrombosis, disseminated intravascular coagulation (DIC), sepsis, septic
XX

XX shock, emboli e.g. pulmonary emboli, transplantation such as bone marrow
XX

XX transplantation, burns, pregnancy, major surgery/trauma or adult
XX

XX respiratory distress syndrome (ARDS). The variant protein C has an
XX

XX increased resistance to activation by e.g. human plasma and alpha-1
XX

XX antitrypsin. The conjugates have an increased in vivo half-life,
XX

XX increased serum half-life, increased resistance to inhibitors, reduced
XX

XX renal clearance, reduced immunogenicity and/or increased bioavailability.
XX

XX The conjugate offers a number of advantages over the currently available
XX

XX APC products, including longer duration between injections, Moreover, a
XX

XX administration of less protein, and fewer side effects. Moreover, a
XX

XX reduced anticoagulant activity is beneficial to reduce the risk of
XX

XX bleeding while maintaining the anti-inflammatory activity of APC
XX

XX (activated protein C) conjugates. This must be especially important when
XX

XX the conjugate has an extended plasma life. The gene for protein C is
XX

XX located on chromosome 2q13-q14. The present sequence represents a zymogen
XX

XX protein C variant of the invention. Note: The present sequence is not
XX

XX shown in the specification but was created by the indexer using the
XX

XX protein C sequence appearing as AAU99002 and the information in claim 9
XX

XX Sequence 419 AA;
XX

XX Query Match 99.3%; Score 2308; DB 5; Length 419;
XX

XX Best Local Similarity 99.5%; Pred. No. 3.3e-142;
XX

XX Matches 417; Conservative 1; Mismatches 1; Indels 0; Gaps 0;
XX

QY 1 ANSFLELRHSLRECEIEICDPEEAKETFGVNDTLAFMSKAVDQCLVPLEHCA 60
DB 1 ANSFLELRHSLRECEIEICDPEEAKETFGVNDTLAFMSKAVDQCLVPLEHCA 60
QY 61 SLCCGHGTCIDIGSGSCDCRSWGGRFCQREVSFLNCSLNDGCTHYCLAEVGRRCSC 120

Db 61 SLCCGHTCIDIGSFSCDCRSGMEGRFCQREVSFLNCSLDNGGCTHYCLEEVGMRCSG 120

QY 121 APGYKLGDDLLQCHPAVKFPCGRPKMEKRSKSHLKTDEDEDDQVDPRLIDGKTRRGD 180

Db 121 APGYKLGDDLLQCHPAVKFPCGRPKMEKRSKSHLKTDEDEDDQVDPRLIDGKTRRGD 180

QY 181 SPQOVVLLDSKKKLACGAVLTHPSWVLTAAHCHMSKKLVLAGDYDRMEKWEJDDI 240

Db 181 SPQOVVLLDSKKKLACGAVLTHPSWVLTAAHCHMSKKLVLAGDYDRMEKWEJDDI 240

QY 241 KEVFAHPNYSKSTTDNDIALHLAQAATLSQTIIVPICLPDSGLAEELNQAQGETLVTCW 300

Db 241 KEVFAHPNYSKSTTDNDIALHLAQAATLSQTIIVPICLPDSGLAEELNQAQGETLVTCW 300

QY 301 GYHSREKAKRNPFTLVNFIKIPVPHNCSFVMSNMVSNMLCAGLIGRDQACEGDS 360

Db 301 GYHSREKAKRNPFTLVNFIKIPVPHNCSFVMSNMVSNMLCAGLIGRDQACEGDS 360

QY 361 GGPVVASFHGTWFLVGLVSWGSCGLAHNYGVYTKVSRYLDMWIGHIRDKKAPQKSMAP 419

Db 361 GGPVVASFHGTWFLVGLVSWGSCGLAHNYGVYTKVSRYLDMWIGHIRDKKAPQKSMAP 419

RESULT 128

AU99089

ID AU99089 standard; protein: 419 AA.

AC AU99089;

XX 23-AUG-2002 (first entry)

DE Human Protein C zymogen protein mutant L386N/H388S.

XX

KM Human; Protein C; N-glycosylation; APC; activated protein C; zymogen;

KM serum half-life; chromosome 2q13-q14; stroke; myocardial infarction;

KW after venous thrombosis; disseminated intravascular coagulation; DIC;

KM sepsis; septic shock; embolism; pulmonary embolism; burn; pregnancy;

KM bone marrow transplantation; major surgery; trauma; ARDS; coagulant;

KM adult respiratory distress syndrome; alpha-1 antitrypsin; mutant; mulein.

XX

OS Homo sapiens.

OS Synthetic.

XX

EH Key

FT 1. 155 Location/Qualifiers

FT /label= Light_chain

FT 156..157

FT /label= Lys_Arg_dipeptide

FT 158..419

FT /label= Heavy_chain

FT 158..169

FT /label= Activation_peptide

FT Misc-difference 386

FT /note= "Wild-type Leu substituted by Asn"

FT FT Misc-difference 388

FT /note= "Wild-type His substituted by Ser"

XX

PN WC002323461-A2.

XX

PD 25-APR-2002.

XX

PF 15-OCT-2001; 2001WO-DK000679.

XX

PR 18-OCT-2000; 2000DK-00001560.

PR 18-OCT-2000; 2000US-0242268P.

PR 21-JUN-2001; 2001DK-0000970.

PR 21-JUN-2001; 2001US-0300154P.

XX

PA (MAXY-) MAXYGEN APS.

PA (MAXY-) MAXYGEN HOLDINGS LTD.

XX

PI Andersen KV, Pedersen AH, Freshgaard PO;

DR WP1; 2002-489875/52.

XX

PT Novel conjugate useful for treating or preventing septic shock, stroke

PT and myocardial infarction, comprises non-polypeptide group covalently

PT attached to protein C polypeptide comprising an attachment group.

XX

PS Claim 9; Page; 92pp; English.

XX

CC The invention relates to a conjugate (I) comprising at least one non-

CC polypeptide moiety (II) (e.g. an N-glycosyl group) covalently attached to

CC a protein C polypeptide comprising an amino acid sequence which differs

CC from that of a parent protein C polypeptide (III) in at least one

CC introduced and/or at least one removed amino acid residue comprising an

CC attachment group for the non-polypeptide group (e.g. an N-glycosylation

CC site). Also included are (1) a variant (IV) of (III) comprising a

CC substitution in a position (P) where (P) is an amino acid with at least

CC 25% of its side group exposed to the surface, with the proviso that the

CC substitution is not Thr245Ser/Ala/His/Lys/Arg/Asn/Glu/Gly/Gln or

CC Tyr302Ser/Ala/Thr/His/Lys/Arg/Asn/Glu/Gly/Gln or Phe316Ser/Ala/Thr/

CC His/Lys/Arg/Asn/Asp/Glu/Gly/Gln; (2) a nucleoside sequence (V) encoding

CC (VI); (3) an expression vector (VII) comprising (V); (4) a host cell (VII)

CC comprising (V) or (VI); (5) increasing (M2) the functional in vivo half-

CC life or the serum half-life of a parent protein C polypeptide. The

CC conjugates, variants and protein C proteins are useful as medicaments,

CC and in the manufacture of medicaments for the treatment (and

CC diagnosis/prevention) of stroke, myocardial infarction, after venous

CC thrombosis, disseminated intravascular coagulation (DIC), sepsis, septic

CC shock, emboli e.g. pulmonary emboli, transplantation such as bone marrow

CC transplantation, burns, pregnancy, major surgery/trauma or adult

CC respiratory distress syndrome (ARDS). The variant protein C has an

CC increased resistance to activation by e.g. human plasma and alpha-1

CC antitrypsin. The conjugates have an increased in vivo half-life,

CC increased serum half-life, increased resistance to inhibitors, reduced

CC renal clearance, reduced immunogenicity and/or increased bioavailability.

CC The conjugate offers a number of advantages over the currently available

CC APC products, including longer duration between injections,

CC administration of less protein, and fewer side effects. Moreover, a

CC reduced anticoagulant activity is beneficial to reduce the risk of

CC bleeding while maintaining the antiinflammatory activity of APC

CC (activated protein C) conjugates. This must be especially important when

CC the conjugate has an extended plasma life. The gene for protein C is

CC located on chromosome 2q13-q14. The present sequence represents a zymogen

CC protein C variant of the invention. Note: The present sequence is not

CC shown in the specification but was created by the indexer using the

CC protein C sequence appearing as AU99002 and the information in claim 9

XX

SQ Sequence 419 AA:

Query Match 99.3%; Score 2308; DB 5; Length 419;

Best Local Similarity 99.5%; Pred. No. 3.3e-142;

Matches 417; Conservative 0; Mismatches 2; Indels 0; Gaps 0;

QY 1 ANSFLEHRSSLSRRCCTEETCDPEAKETFQNVDDTLAFSKHVGDDCVLPLEHCA 60

Db 1 ANSFLEHRSSLSRRCCTEETCDPEAKETFQNVDDTLAFSKHVGDDCVLPLEHCA 60

QY 61 SLCCGHTCIDIGSFSCDCRSGMEGRFCQREVSFLNCSLDNGGCTHYCLEEVGMRCSG 120

Db 61 SLCCGHTCIDIGSFSCDCRSGMEGRFCQREVSFLNCSLDNGGCTHYCLEEVGMRCSG 120

QY 121 APGYKLGDDLLQCHPAVKFPCGRPKMEKRSKSHLKTDEDEDDQVDPRLIDGKTRRGD 180

Db 121 APGYKLGDDLLQCHPAVKFPCGRPKMEKRSKSHLKTDEDEDDQVDPRLIDGKTRRGD 180

QY 181 SPQOVVLLDSKKKLACGAVLTHPSWVLTAAHCHMSKKLVLAGDYDRMEKWEJDDI 240

Db 181 SPQOVVLLDSKKKLACGAVLTHPSWVLTAAHCHMSKKLVLAGDYDRMEKWEJDDI 240

QY 241 KEVFAHPNYSKSTTDNDIALHLAQAATLSQTIIVPICLPDSGLAEELNQAQGETLVTCW 300

Db 241 KEVFAHPNYSKSTTDNDIALHLAQAATLSQTIIVPICLPDSGLAEELNQAQGETLVTCW 300

QY 301 GYHSREKAKRNPFTLVNFIKIPVPHNCSFVMSNMVSNMLCAGLIGRDQACEGDS 360

DB 301 GHSREKREKRTTFTVNFKIVVPHNEGSEVMSNVSENNLCAGLIGRQACGDS 360
QY 361 GGPVASFHGTWFLVGLVSWGEGGCLLHNYGYTTKVSRYLDWIRHGRDKEAPQKSNAP 419
DB 361 GGPVASFHGTWFLVGLVSWGEGGCLLHNYGYTTKVSRYLDWIRHGRDKEAPQKSNAP 419

RESULT 129
AAU99090
ID AAU99090 standard; protein; 419 AA.
AC AAU99090;
XX 23-AUG-2002 (first entry)
DE Human Protein C zymogen protein mutant L386N/H388T.
XX
XX Human; Protein C; N-glycosylation; APC; activated protein C; zymogen;
XX serum half-life; chromosome 2q13-q14; stroke; myocardial infarction;
XX after venous thrombosis; disseminated intravascular coagulation; DIC;
XX sepsis; septic shock; embolism; pulmonary embolism; burn; pregnancy;
XX bone marrow transplantation; major surgery; trauma; ARDS; coagulant;
XX adult respiratory distress syndrome; alpha-1 antitrypsin; mutant; mucin.
XX
OS Homo sapiens.
CS Synthetic.
FH Key Location/Qualifiers
FT Protein 1..155
FT /label= Light_chain
FT Peptide 156..157
FT /label= Lys_Arg_dipeptide
FT Protein 158..419
FT /label= Heavy_chain
FT Peptide 158..169
FT /label= Activation_peptide
FT Misc-difference 386 /note= "Wild-type Leu substituted by Asn"
FT /note= 388
FT Misc-difference /note= "Wild-type His substituted by Thr"

XX
XX W0200232461-A2.
XX
XX 25-APR-2002.
XX
XX 15-OCT-2001; 2001MO-DK00679.
XX
XX 18-OCT-2000; 2000DK-00001560.
XX 18-OCT-2000; 2000US-0242268P.
XX 21-JUN-2001; 2001DK-00000970.
XX 21-JUN-2001; 2001US-0300154P.
XX
XX (MAXY-) MAXYGEN APS.
XX (MAXY-) MAXYGEN HOLDINGS LTD.
XX
XX Andersen KV, Pedersen AH, Friesgaard PO;
XX
XX MPI; 2002-489875/52.
XX
XX Novel conjugate useful for treating or preventing septic shock, stroke
XX and myocardial infarction, comprises non-polypeptide group covalently
XX attached to protein C polypeptide comprising an attachment group.
XX
XX Claim 9; Page; 92pp; English.

XX The invention relates to a conjugate (I) comprising at least one non-
XX polypeptide moiety (II) (e.g. an N-glycosyl group) covalently attached to
XX a protein C polypeptide comprising an amino acid sequence which differs
XX from that of a parent protein C polypeptide (III) in at least one
XX introduced and/or at least one removed amino acid residue comprising an
XX attachment group for the non-polypeptide group (e.g. an N-glycosylation
XX site). Also included are (I) a variant (IV) of (III) comprising a

CC substitution in a position (P) where (P) is an amino acid with at least
CC 25% of its side group exposed to the surface, with the proviso that the
CC substitution is not Thr245Ser/Ala/His/Lys/Arg/Asn/Asp/Glu/Gly/Gln
CC Tyr303Ser/Ala/Thr/His/Lys/Arg/Asn/Asp/Glu/Gly/Gln or Phe336Ser/Ala/Thr/
CC His/Lys/Arg/Asn/Asp/Glu/Gly/Gln; (2) a nucleotide sequence (V) encoding
CC (IV); (3) an expression vector (VI) comprising (V); (4) a host cell (VII)
CC comprising (V) or (VI); (5) increasing (M2) the functional in vivo half-
CC life or the serum half-life of a parent protein C polypeptide. The
CC conjugates, variants and protein C proteins are useful as medicaments,
CC and in the manufacture of medicaments for the treatment (and
CC diagnosis/prevention) of stroke, myocardial infarction, after venous
CC thrombosis, disseminated intravascular coagulation (DIC), sepsis, septic
CC shock, emboli e.g. pulmonary emboli, transplantation such as bone marrow
CC transplantation, burns, pregnancy, major surgery/trauma or adult
CC respiratory distress syndrome (ARDS). The variant protein C has an
CC increased resistance to activation by e.g. human plasma and alpha-1
CC antitrypsin. The conjugates have an increased in vivo half-life,
CC increased serum half-life, increased resistance to inhibitors, reduced
CC renal clearance, reduced immunogenicity and/or increased bioavailability.
CC The conjugate offers a number of advantages over the currently available
CC APC products, including longer duration between injections,
CC administration of less protein, and fewer side effects. Moreover, a
CC reduced anticoagulant activity is beneficial to reduce the risk of
CC bleeding while maintaining the anti-inflammatory activity of APC
CC (activated protein C) conjugates. This must be especially important when
CC the conjugate has an extended plasma life. The gene for protein C is
CC located on chromosome 2q13-q14. The present sequence represents a zymogen
CC protein C variant of the invention. Note: The present sequence is not
CC shown in the specification but was created by the indexer using the
CC protein C sequence appearing as AAU99002 and the information in claim 9
XX
XX SQ Sequence 419 AA;
XX
XX Query Match 99.3%; Score 2307; DB 5; Length 419;
XX Best Local Similarity 99.5%; Pred. No. 3.9e-142;
XX Matches 419; Conservative 0; Mismatches 2; Indels 0; Gaps 0;

QY 1 ANSFLEELHSHSLRECEIERICDFEPAKEIFONVDTTLAFMSKRVADGQCIIVLEHPQA 60
DB 1 ANSFLEELHSHSLRECEIERICDFEPAKEIFONVDTTLAFMSKRVADGQCIIVLEHPQA 60
QY 61 SLCCGHTCTIDIGSFSCDGRSGMEGRFCORRYSEFNLGSLDNGGCTHYCLEEYGMRRCSG 120
DB 61 SLCCGHTCTIDIGSFSCDGRSGMEGRFCORRYSEFNLGSLDNGGCTHYCLEEYGMRRCSG 120
QY 121 APGKLGDDLLQCHRAKFPQCGPMKMEKKRSHLKDTEDEDDYDRLIDGMTRRGD 180
DB 121 APGKLGDDLLQCHRAKFPQCGPMKMEKKRSHLKDTEDEDDYDRLIDGMTRRGD 180
QY 181 SPWQVVLDSKRRKLAQCAVLIHPSWVLTAAQWDESKKLIYRLGSDIRREKKEELDLDI 240
DB 181 SPWQVVLDSKRRKLAQCAVLIHPSWVLTAAQWDESKKLIYRLGSDIRREKKEELDLDI 240
QY 241 KEVFVPHNYSKSTNTNDIALHQAATLSQITVPICLPDSGLARELNQAGCTITVTG 300
DB 241 KEVFVPHNYSKSTNTNDIALHQAATLSQITVPICLPDSGLARELNQAGCTITVTG 300
QY 301 GHSREKREKREKRTTFTVNFKIVVPHNEGSEVMSNVSENNLCAGLIGRQACGDS 360
DB 301 GHSREKREKREKRTTFTVNFKIVVPHNEGSEVMSNVSENNLCAGLIGRQACGDS 360
QY 361 GGPVASFHGTWFLVGLVSWGEGGCLLHNYGYTTKVSRYLDWIRHGRDKEAPQKSNAP 419
DB 361 GGPVASFHGTWFLVGLVSWGEGGCLLHNYGYTTKVSRYLDWIRHGRDKEAPQKSNAP 419

RESULT 130
AAAB82675
ID AAAB82675 standard; protein; 419 AA.
AC AAAB82675;
XX 15-OCT-2001 (first entry)
DT

ID AAR13537 standard; protein; 460 AA.
 AC AAR13537;
 DT 25-MAR-2003 (revised)
 DT 09-JAN-2003 (revised)
 DT 31-OCT-1991 (first entry)
 XX
 DE Human Protein C zymogen N.
 XX
 KM HPC mutant; pro drug; intravascular coagulation; zymogen.
 XX
 OS Homo sapiens.
 XX
 FT Key Location/Qualifiers
 FT Region 198..199
 FT /label= Lys-Arg dipeptide
 XX
 PN EP443875-A.
 XX
 PD 28-AUG-1991.
 XX
 PF 22-FEB-1991; 91EP-00301450.
 XX
 PR 23-FEB-1990; 90US-00484133.
 XX
 PA (ELLIL) LILLY & CO ELLI.
 XX
 PI Gerlitz BE, Grinnell EW;
 XX
 DR WPI; 1991-254444/35.
 XX
 PT Recombinant mutants of human protein C - having aminoacid changes for
 PT increased sensitivity to activation by thrombin and thrombin-
 PT chromomodulin complex.
 XX
 PS Claim 23; Page 37-38; 67pp; English.
 XX
 CC Protein C Zymogen N comprises a signal peptide and propeptide of a gamma-
 CC carboxylated secreted protein, the light chain of HPC, a basic dipeptide
 CC (1.e. Lys-Arg, but can also be Arg-Lys, Lys-Lys or Arg-Arg) and amino
 CC acid residues 200-461 of HPC but with Ile(213) deleted and Asp(214)
 CC replaced by Asn. The zymogen can be activated in vivo by thrombin alone
 CC (even in the presence of calcium) and is more susceptible to activation
 CC by thrombin/ thrombomodulin than native HPC zymogen. Zymogen N can be
 CC administered as a pro drug useful in prevention and treatment of diseases
 CC involving intravascular coagulation. It can also be given to
 CC thrombocytopenic patients with invasive cancers with effective and
 CC intensive chemotherapy. See also AAR13538-40 and AAR13623. (Updated on 09
 CC -JAN-2003 to add missing OS field.) (Updated on 25-MAR-2003 to correct PA
 CC field.)
 CC
 SO Sequence 460 AA;
 Query Match 99.2%; Score 2304.5; DB 2; Length 460;
 Best Local Similarity 99.5%; Pred. No. 6.2e-142;
 Matches 417; Conservative 1; Mismatches 0; Indels 1; Gaps 1;

QY 241 KEVFEHPNYSKSTNDNDIALALHAPATLSQTTVPICLPDSCLEPRLNQAQGETLVYGM 300
 DB 282 KEVFEHPNYSKSTNDNDIALHAPATLSQTTVPICLPDSCLEPRLNQAQGETLVYGM 341
 QY 301 GYHSREKEAKRRTFLVNFIKIPVPHNECEYMNVMVSENMLCAGILDRODACEGDS 360
 DB 342 GYHSREKEAKRRTFLVNFIKIPVPHNECEYMNVMVSENMLCAGILDRODACEGDS 401
 QY 361 GGEVVASFHGTWFLVGVSVSGSCGLHNVGYTYKYSRIIDWTHGHIDKAEARQKSNAP 419
 DB 402 GGEVVASFHGTWFLVGVSVSGSCGLHNVGYTYKYSRIIDWTHGHIDKAEARQKSNAP 460
 RESULT 132
 AAB82676
 ID AAB82676 standard; protein; 419 AA.
 AC AAB82676;
 XX
 DT 15-OCT-2001 (first entry)
 XX
 DE Human protein C derivative (S116/Q32E/N33D/L194S/T254S).
 XX
 KM Protein C; human; coronary syndrome; thrombosis; angina;
 KM myocardial infarction; vascular occlusive disorder; hypercoagulation;
 KM sepsis; protein C deficiency; occlusion; thromboembolism; stenosis;
 KM antibacterial; immunosuppressive; thrombolytic; cardiac; antilanginal;
 KM anticoagulant; therapy; mutant; mutein.
 XX
 OS Homo sapiens.
 OS Synthetic.
 XX
 FT Key Location/Qualifiers
 FT Domain 1..45
 FT /note= "G1a domain"
 FT Modified-site 6
 FT /note= "gamma-carboxylated"
 FT Modified-site 7
 FT /note= "gamma-carboxylated"
 FT Misc-difference 11
 FT /note= "Ser in wild-type protein"
 FT Modified-site 14
 FT /note= "gamma-carboxylated"
 FT Modified-site 16
 FT /note= "gamma-carboxylated"
 FT Modified-site 19
 FT /note= "gamma-carboxylated"
 FT Modified-site 20
 FT /note= "gamma-carboxylated"
 FT Modified-site 25
 FT /note= "gamma-carboxylated"
 FT Modified-site 26
 FT /note= "gamma-carboxylated"
 FT Modified-site 29
 FT /note= "N-glycosylated"
 FT Misc-difference 32
 FT /note= "Gln in wild-type protein"
 FT Misc-difference 33
 FT /note= "Asn in wild-type protein"
 FT Disulfide-bond 50..69
 FT Disulfide-bond 59..64
 FT Disulfide-bond 80..89
 FT Disulfide-bond 98..109
 FT Disulfide-bond 120..133
 FT Disulfide-bond 141..277
 FT Cleavage-site 156..157
 FT /note= "Cleavage makes a 2-chain inactive precursor (155-
 FT amino acid light chain attached via a disulfide bond to a
 FT 262-amino acid heavy chain)"
 FT 158..169
 FT /note= "Activation peptide; removal activates the 2-chain
 FT zymogen"

FT Cleavage-site 169..170
 FT /note="thrombin cleavage site"
 FT Misc-difference 194
 FT /note="Ileu in wild-type protein"
 FT Disulfide-bond 196..212
 FT Modified-site 248
 FT /note="N-glycosylated"
 FT Misc-difference 254
 FT /note="Thr in wild-type protein"
 FT Modified-site 313
 FT /note="N-glycosylated"
 FT Modified-site 329
 FT /note="N-glycosylated"
 FT Disulfide-bond 331..345
 FT Disulfide-bond 356..384

WO200157193-A2.
 09-AUG-2001.
 19-JAN-2001; 2001WO-US000020.
 02-FEB-2000; 2000US-0179801P.
 14-MAR-2000; 2000US-0189197P.
 (ELIL) LILLY & CO ELI.
 Gerlitz BE, Jones BE;
 MPI; 2001-496919/54.
 N-PSDB; AAH26364.
 Novel human protein C derivative for treating, e.g., myocardial infarction, unstable angina, sepsis, thrombotic disorders, acute arterial thrombotic occlusion, and thromboembolism.
 Claim 4: Page 53-54; 63pp; English.

The present sequence is that of a claimed human protein C derivative in which Ser at position 11 of the mature wild-type protein C sequence (see AAB82673) is substituted with Gly, Gln at position 32 with Glu, Asn at position 33 with Asp, Leu at position 194 with Ser, and Thr at position 254 with Ser. It is an example of protein C derivatives of the invention that have at least 2 amino acid substitutions, but which have increased anticoagulant activity and resistance to inactivation by serpins compared with the wild-type protein, while retaining the biological activity of the wild-type protein. A method of producing the derivatives using recombinant DNA methods is claimed. The protein C derivatives are useful for treating coronary syndromes and disease states predisposing to thrombosis (e.g., myocardial infarction and unstable angina), vascular occlusive disorders and hypercoagulable states, sepsis (in combination with bactericidal permeability increasing protein or with tissue factor pathway inhibitor), thrombotic disorders (in combination with an anti-platelet agent or by local delivery through an intracoronary catheter), protein C deficiency, acute arterial thrombotic occlusion, thromboembolism, or stenosis in coronary, cerebral or peripheral arteries or in vascular grafts. Human patients with genetically predisposed prothrombotic disorders may be treated by gene therapy (all claimed)

Sequence 419 AA:

Query Match 99.1%; Score 2302; DB 4; Length 419;
 Best Local Similarity 98.8%; Pred. No. 8.2e-142;
 Matches 414; Conservative 3; Mismatches 2; Indels 0; Gaps 0;

QY 1 ANSFLELRHSSLEKCEIEICDPEAKEIFQNVDDTLAFNSKVDGQCLVPLRHC 60
 D6 1 ANSFLELRHSSLEKCEIEICDPEAKEIFEDVDTLAFNSKVDGQCLVPLRHC 60
 QY 61 SLCGCHGTCIDGIGSSCDRCGMEGRFCQREVSFLNSLNGGCTHYCLEEVGRRCSC 120
 D6 61 SLCGCHGTCIDGIGSSCDRCGMEGRFCQREVSFLNSLNGGCTHYCLEEVGRRCSC 120

QY 121 APGYKLGDDLLQCHPAVKFPCGRPWMEKRSLSKEDTEDQEDVDPRLIDGKTRRGD 180
 D6 121 APGYKLGDDLLQCHPAVKFPCGRPWMEKRSLSKEDTEDQEDVDPRLIDGKTRRGD 180
 QY 181 SPQVVLNLSKKKGLACANLIHPSWLTAAHCEBESKCLVNLGVDLRREKVELLDI 240
 D6 181 SPQVVLNLSKKKGSACAVLIHPSWLTAAHCEBESKCLVNLGVDLRREKVELLDI 240
 QY 241 KEVVEHNTSKSTTDNDALALHAPATISQTIPICLPDSGLARELNQAGETLVTCM 300
 D6 241 KEVVEHNTSKSTTDNDALALHAPATISQTIPICLPDSGLARELNQAGETLVTCM 300
 QY 301 GYHSSREKAKENRTFVNLFIKDPVPEHNECEVSNMSENNLCAGILGRDQACEGDS 360
 D6 301 GYHSSREKAKENRTFVNLFIKDPVPEHNECEVSNMSENNLCAGILGRDQACEGDS 360
 QY 361 GGPVVASFHGTWELVGLVSNWEGCGILHNYGYTTSRYLDVTHGIHDKAPKSNAP 419
 D6 361 GGPVVASFHGTWELVGLVSNWEGCGILHNYGYTTSRYLDVTHGIHDKAPKSNAP 419

RESULT 133

AA156803
 ID AA156803 standard; protein; 415 AA.

AA156803;
 27-MAR-2000 (first entry)

Truncated human protein C polypeptide.

Protein C; truncated; thrombotic disorder; vascular disorder; stroke; hypercoagulable state; myocardial infarction; unstable angina; sepsis; adult respiratory distress syndrome; sickle cell anemia; human.

Homo sapiens.

MO9963070-A1.

09-DEC-1999.

01-JUN-1999; 99MO-US011969.

01-JUN-1998; 98US-0087585P.

(ELIL) LILLY & CO ELI.

Huang L, Riggin RM;

WPI; 2000-086975/07.

N-PSDB; AA246750.

Novel polypeptide useful for treating thrombotic and vascular diseases and hypercoagulation, e.g. stroke.

Claim 2; Page 22-23; 23pp; English.

This represents a human protein C polypeptide having a light chain and a truncated heavy chain. The protein can be produced by standard recombinant methodologies. The truncated protein C is used to treat a wide range of thrombotic or vascular disorders or hypercoagulable states, e.g. stroke, myocardial infarction; unstable angina; sepsis; adult respiratory distress syndrome; sickle cell anemia etc. The truncated protein C retains the activity of full-length protein C but does not undergo C-terminal cleavage, of the heavy chain, during activation

Sequence 415 AA:

Query Match 98.9%; Score 2298; DB 3; Length 415;
 Best Local Similarity 100.0%; Pred. No. 1.5e-141;
 Matches 415; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 ANSFLELRHSSLEKCEIEICDPEAKEIFQNVDDTLAFNSKVDGQCLVPLRHC 60

SQ Sequence 419 AA;

Query Match 98.8%; Score 2298; DB 4; Length 419;

Best Local Similarity 98.8%; Pred. No. 1.5e-141; Mismatches 414; Conservative 2; Mismatches 3; Indels 0; Gaps 0;

QY 1 ANSFLELRHSLSRECEIEICDFEAKETIFONDDTLAFMSKHYDQCLVPLEHPA 60
 DB 1 ANSFLELRHSLSRECEIEICDFEAKETIFEDVDTLAFMSKHYDQCLVPLEHPA 60
 QY 61 SLCCGHTCTIDIGISFSCDCRSGMEGRFCQREVSFLNCSLDNGGCTHYCLEEYGMRCSC 120
 DB 61 SLCCGHTCTIDIGISFSCDCRSGMEGRFCQREVSFLNCSLDNGGCTHYCLEEYGMRCSC 120
 QY 121 APGYKGGDILQCHPAVPCGPRPKMEKKRSHLKRDEDDQVDPRLDGMTRRD 180
 DB 121 APGYKGGDILQCHPAVPCGPRPKMEKKRSHLKRDEDDQVDPRLDGMTRRD 180
 QY 181 SPQVYLLDSKKKLAGAVLIHPSWVLTAAHCDMSKKLVLEGEYDLRMEKMEILD 240
 DB 181 SPQVYLLDSKKKLAGAVLIHPSWVLTAAHCDMSKKLVLEGEYDLRMEKMEILD 240
 QY 241 KEVFNHNSKSTTNDIALHLAOPATLSQTIPTCLPDSGLARELNQAQGETLVYGM 300
 DB 241 KEVFNHNSKSTTNDIALHLAOPATLSQTIPTCLPDSGLARELNQAQGETLVYGM 300
 QY 301 GYSSREKAKRRTFVNFITKIPVPHNCEVMSNMVSENNLCAGILGRDQACEGDS 360
 DB 301 GYSSREKAKRRTFVNFITKIPVPHNCEVMSNMVSENNLCAGILGRDQACEGDS 360
 QY 361 GGMVASFHGTWFLVGLVSWGEGCGLLHNYGYTVKVSRYLDWIHGHIRKPEAPKSNAP 419
 DB 361 GGMVASFHGTWFLVGLVSWGEGCGLLHNYGYTVKVSRYLDWIHGHIRKPEAPKSNAP 419

RESULT 135

ID AAE08629 standard; protein; 419 AA.

AAE08629;

01-NOV-2001 (first entry)

Human protein C derivative #3.

Human; protein C derivative; anticoagulation activity; thrombosis;

serpin inactivation; acute coronary syndrome; myocardial infarction;

vascular occlusive disorder; hypercoagulable state; angina; sepsis;

disseminated intravascular coagulation; DIC; burn; transplantation;

sickle cell disease; viral haemorrhagic fever; protein C deficiency;

haemolytic uremic syndrome; acute arterial thrombotic occlusion;

thrombocytopenia; prothrombotic disorder; gene therapy; thalassemia.

Homo sapiens.

Key Location/Qualifiers

Misc-difference 10 /note= "Encoded by CAA"

WO200159084-A1.

16-AUG-2001.

02-FEB-2001; 2001MO-US001221.

11-FEB-2000; 2000US-0181948P.

14-MAR-2000; 2000US-0189199P.

(ELIL) LILLY & CO ELI.

Gerlitz BE, Grinnell BW, Jones BE.

N-PEDB; AAD15227.

Protein C derivative for treating acute coronary syndromes, vascular

occlusive disorders, thrombotic disorders and sepsis, comprises

substitutions at specified amino acid positions.

Claim 5; Page 48-49; 59pp; English.

The invention relates to human protein C derivatives and nucleic acid molecules encoding such derivatives. These derivatives have increased anticoagulation activity, resistance to serpin inactivation and increased sensitivity to thrombin activation compared to wild type protein C, and retain the biological activity of the wild type human protein C. Protein C derivatives are useful in the manufacture of a medicament for the treatment of acute coronary syndromes e.g. myocardial infarction and unstable angina, and disease states predisposing to thrombosis: vascular occlusive disorders and hypercoagulable states e.g. disseminated intravascular coagulation (DIC), burns, transplantations, chloasma, sickle cell disease, viral haemorrhagic fever and haemolytic uremic syndrome; sepsis in combination with bacterial permeability increasing protein; thrombotic disorders in combination with an anti-platelet agent; protein C deficiency; acute arterial thrombotic occlusion, thrombocytopenia or stenosis in coronary, cerebral or peripheral arteries or in vascular grafts in combination with a thrombolytic agent. Nucleic acid molecules of the invention are useful for treating humans with genetically predisposed prothrombotic disorders by gene therapy. The present sequence is human protein C derivative

Sequence 419 AA;

Query Match 98.8%; Score 2296; DB 4; Length 419;

Best Local Similarity 98.8%; Pred. No. 2e-141; Mismatches 414; Conservative 2; Mismatches 3; Indels 0; Gaps 0;

QY 1 ANSFLELRHSLSRECEIEICDFEAKETIFONDDTLAFMSKHYDQCLVPLEHPA 60
 DB 1 ANSFLELRHSLSRECEIEICDFEAKETIFEDVDTLAFMSKHYDQCLVPLEHPA 60
 QY 61 SLCCGHTCTIDIGISFSCDCRSGMEGRFCQREVSFLNCSLDNGGCTHYCLEEYGMRCSC 120
 DB 61 SLCCGHTCTIDIGISFSCDCRSGMEGRFCQREVSFLNCSLDNGGCTHYCLEEYGMRCSC 120
 QY 121 APGYKGGDILQCHPAVPCGPRPKMEKKRSHLKRDEDDQVDPRLDGMTRRD 180
 DB 121 APGYKGGDILQCHPAVPCGPRPKMEKKRSHLKRDEDDQVDPRLDGMTRRD 180
 QY 181 SPQVYLLDSKKKLAGAVLIHPSWVLTAAHCDMSKKLVLEGEYDLRMEKMEILD 240
 DB 181 SPQVYLLDSKKKLAGAVLIHPSWVLTAAHCDMSKKLVLEGEYDLRMEKMEILD 240
 QY 241 KEVFNHNSKSTTNDIALHLAOPATLSQTIPTCLPDSGLARELNQAQGETLVYGM 300
 DB 241 KEVFNHNSKSTTNDIALHLAOPATLSQTIPTCLPDSGLARELNQAQGETLVYGM 300
 QY 301 GYSSREKAKRRTFVNFITKIPVPHNCEVMSNMVSENNLCAGILGRDQACEGDS 360
 DB 301 GYSSREKAKRRTFVNFITKIPVPHNCEVMSNMVSENNLCAGILGRDQACEGDS 360
 QY 361 GGMVASFHGTWFLVGLVSWGEGCGLLHNYGYTVKVSRYLDWIHGHIRKPEAPKSNAP 419
 DB 361 GGMVASFHGTWFLVGLVSWGEGCGLLHNYGYTVKVSRYLDWIHGHIRKPEAPKSNAP 419

RESULT 136

ID AAR13538 standard; protein; 460 AA.

AAR13538;

25-MAR-2003 (revised)

09-JAN-2003 (revised)

31-OCT-1991 (first entry)

PT /note= "N-glycosylated"
 FT Misc-difference 254
 FT /note= "Thr in wild-type protein"
 FT Modified-site 313
 FT /note= "N-glycosylated"
 FT Modified-site 329
 FT /note= "N-glycosylated"
 FT Disulfide-bond 331..345
 FT Disulfide-bond 356..384
 XX
 FN W0200157193-A2.
 PD
 PD 09-AUG-2001.
 PE 19-JAN-2001; 2001MO-US000020.
 XX
 XX 02-FEB-2000; 2000US-0179801P.
 ER 14-MAR-2000; 2000US-0189197P.
 XX
 XX {ELIL } LILLY & CO ELI.
 PA
 PI Gerlitz BE, Jones BE;
 XX
 XX WPI; 2001-496919/54.
 DR
 XX
 XX Novel human protein C derivative for treating, e.g., myocardial
 PT infarction, unstable angina, sepsis, thrombotic disorders, acute arterial
 PT thrombotic occlusion, and thromboembolism.
 XX
 XX Claim 6; Page 56-57; 63pp; English.
 PS
 XX The present sequence is that of a claimed human protein C derivative in
 CC which His at position 10 of the wild-type protein C sequence (see
 CC AAB82673) is substituted with Gln. Ser at position 11 with Gly, Gln at
 CC position 32 with Glu, Asn at position 33 with Asp, Leu at position 194
 CC with Ser, and Thr at position 254 with Ser. It is an example of protein C
 CC derivatives of the invention that have at least 2 amino acid
 CC substitutions, but which have increased anticoagulant activity and
 CC resistance to inactivation by serpin compared with the wild-type
 CC protein, while retaining the biological activity of the wild-type
 CC protein. A method of producing the derivatives using recombinant DNA
 CC methods is claimed. The protein C derivatives are useful for treating
 CC coronary syndromes and disease states predisposing to thrombosis (e.g.,
 CC myocardial infarction and unstable angina), vascular occlusive disorders
 CC and hypercoagulable states, sepsis (in combination with bactericidal
 CC permeability increasing protein or with tissue factor pathway inhibitor),
 CC thrombotic disorders (in combination with an anti-platelet agent or by
 CC local delivery through an intracoronary catheter), protein C deficiency,
 CC acute arterial thrombotic occlusion, thromboembolism, or stenosis in
 CC coronary, cerebral or peripheral arteries or in vascular grafts. Human
 CC patients with genetically predisposed prothrombotic disorders may be
 CC treated by gene therapy (all claimed)
 XX
 XX
 SQ Sequence 419 AA;
 Query Match 98.7%; Score 2294; DB 4; Length 419;
 Best Local Similarity 98.6%; Pred. No. 2.7e-141;
 Matches 413; Conservative 3; Mismatches 3; Indels 0; Gaps 0;

DB 181 SPQVVLDSKKKACAGVLIHPSWVLTAAHOMDESGLLVLRGEVDARREKWEJLDLI 240
 QY KEVYHVPYKSTTDNDIALHQAQATLSQTVPLCLPDSGAREELNAGQETLVTS 300
 DB 241 KEVYHVPYKSTTDNDIALHQAQATLSQTVPLCLPDSGAREELNAGQETLVTS 300
 DB 241 KEVYHVPYKSTTDNDIALHQAQATLSQTVPLCLPDSGAREELNAGQETLVTS 300
 QY GHSHREKARNTFVLFNFKIPVPPNECEVSNMVSNNLCAGLISDRODAGEGDS 360
 DB 301 GHSHREKARNTFVLFNFKIPVPPNECEVSNMVSNNLCAGLISDRODAGEGDS 360
 QY 361 GGMVVASFHGTWFLVGLVSWGSCGLNNVGYTKVSRVLDIHGIRDKAPQKSNAP 419
 DB 361 GGMVVASFHGTWFLVGLVSWGSCGLNNVGYTKVSRVLDIHGIRDKAPQKSNAP 419
 RESULT 128
 AA08627
 ID AA08627 standard; protein; 419 AA.
 XX
 AC AA08627;
 XX
 DT 01-NOV-2001 (first entry)
 XX
 DE Human protein C derivative #1.
 XX
 XX Human; protein C derivative; anticoagulation activity; thrombosis;
 KW serpin inactivation; acute coronary syndrome; myocardial infarction;
 KW vascular occlusive disorder; hypercoagulable state; angina; sepsis;
 KW disseminated intravascular coagulation; DIC; burn; transplantation;
 KW sickle cell disease; viral haemorrhagic fever; protein C deficiency;
 KW haemolytic uremic syndrome; acute arterial thrombotic occlusion;
 KW thromboembolism; prothrombotic disorder; gene therapy; thalassemia.
 XX
 OS Homo sapiens.
 XX
 PN W0200159084-A1.
 PD
 PD 16-AUG-2001.
 XX
 XX 02-FEB-2001; 2001MO-US001221.
 PF
 XX 11-FEB-2000; 2000US-0181948P.
 PR 14-MAR-2000; 2000US-0189199P.
 XX
 XX {ELIL } LILLY & CO ELI.
 PA
 PI Gerlitz BE, Grinnell BW, Jones BE;
 XX
 XX WPI; 2001-514662/56.
 DR N-PSDB; AAD15225.
 XX
 XX Protein C derivative for treating acute coronary syndromes, vascular
 PT occlusive disorders, thrombotic disorders and sepsis, comprises
 PT substitutions at specified amino acid positions.
 XX
 XX
 XX Claim 3; Page 46-47; 59pp; English.
 PS
 PS The invention relates to human protein C derivatives and nucleic acid
 CC molecules encoding such derivatives. These derivatives have increased
 CC anticoagulation activity, resistance to serpin inactivation and increased
 CC sensitivity to thrombin activation compared to wild type protein C, and
 CC retains the biological activity of the wild type human protein C. Protein
 CC C derivatives are useful in the manufacture of a medicament for the
 CC treatment of acute coronary syndromes e.g. myocardial infarction and
 CC unstable angina; and disease states predisposing to thrombosis; vascular
 CC occlusive disorders and hypercoagulable states e.g. disseminated
 CC intravascular coagulation (DIC), burns, transplantations, thalassemia,
 CC sickle cell disease, viral haemorrhagic fever and haemolytic uremic
 CC syndrome; sepsis in combination with bacterial permeability increasing
 CC protein; thrombotic disorders in combination with an anti-platelet agent;
 CC protein C deficiency; acute arterial thrombotic occlusion,
 CC thromboembolism or stenosis in coronary, cerebral or peripheral arteries
 CC or in vascular grafts in combination with a thrombolytic agent. Nucleic

CC acid molecules of the invention are useful for treating humans with
 CC genetically predisposed prothrombotic disorders by gene therapy. The
 CC present sequence is human protein C derivative
 XX
 SQ Sequence 419 AA;

Query Match 98.5%; Score 2290; DB 4; Length 419;
 Best Local Similarity 98.6%; Pred. No. 4.9e-141;
 Matches 413; Conservative 2; Mismatches 4; Indels 0; Gaps 0;

QY 1 ANSFLEELRHSLERECIEICDFEAKETIFONVDTLAFMSKIVDSQCLVPLEHPCA 60
 DB 1 ANSFLEELRHSLERECIEICDFEAKETIFEDVDTLAFMSKIVDSQCLVPLEHPCA 60
 QY 61 SLCCGHGTCIDIGSGPSDCRSGWGRFCQREVSFLNCSLDNGGCTHYCLEEVGRRCSC 120
 DB 61 SLCCGHGTCIDIGSGPSDCRSGWGRFCQREVSFLNCSLDNGGCTHYCLEEVGRRCSC 120
 QY 121 AFGYKLGDDLLQCHPAVKEPCGRPMKMEKESHLKRDTEDEQVFPRLIKGKMTRRGD 180
 DB 121 AFGYKLGDDLLQCHPAVKEPCGRPMKMEKESHLKRDTEDEQVFPRLIKGKMTRRGD 180
 QY 181 SPWQVTLDSKKKLAGAVLIHPSWVLTAAHOMDESKLVLGEYDLRMEKELDDI 240
 DB 181 SPWQVTLDSKKKLAGAVLIHPSWVLTAAHOMDESKLVLGEYDLRMEKELDDI 240
 QY 241 KEVFAHPNYSKSTTDNDIALHLAOPATLSQTIIVICLPDSGLARELNOAGETLVYGM 300
 DB 241 KEVFAHPNYSKSTTDNDIALHLAOPATLSQTIIVICLPDSGLARELNOAGETLVYGM 300
 QY 301 GYHSREKEAKRNRTFVINFIKIPVPHNCEVMSNMYSENMLCAGILGDDQACEGDS 360
 DB 301 GYHSREKEAKRNRTFVINFIKIPVPHNCEVMSNMYSENMLCAGILGDDQACEGDS 360
 QY 361 GGPWVASFHGTWFLVGLVSWGBCGLLHNYGYTKVSRYLWIHGHIRDEKAPQKSNAP 419
 DB 361 GGPWVASFHGTWFLVGLVSWGBCGLLHNYGYTKVSRYLWIHGHIRDEKAPQKSNAP 419

RESULT 139

AAE08630
 ID AAE08630 standard; protein; 419 AA.

AC AAE08630;
 DT 01-NOV-2001 (first entry)
 DE Human protein C derivative #4.

XX Human; protein C derivative; anticoagulation activity; thrombosis;
 KW serpin inactivation; acute coronary syndrome; myocardial infarction;
 KW vascular occlusive disorder; hypercoagulable state; angina; sepsis;
 KW disseminated intravascular coagulation; DIC; burn; transplantation;
 KW sickle cell disease; viral haemorrhagic fever; protein C deficiency;
 KW haemolytic uremic syndrome; acute arterial thrombotic occlusion;
 KW thromboembolism; prothrombotic disorder; gene therapy; thalassemia.

OS Homo sapiens.
 XX
 PN WO200159084-A1.
 PD 16-AUG-2001.
 XX
 PF 02-FEB-2001; 2001WO-US001221.
 XX
 PR 11-FEB-2000; 2000US-0181948P.
 PR 14-MAR-2000; 2000US-0189199P.
 XX
 PA (ELIL) LILLY & CO ELL.
 XX
 PI Gerlitz BE, Grinnell EM, Jones BE;
 XX
 DR WPI, 2001-514662/56.

DR N-PSDB; MAD15228.

XX Protein C derivative for treating acute coronary syndromes, vascular
 PT occlusive disorders, thrombotic disorders and sepsis, comprises
 PT substitutions at specified amino acid positions.

PS Claim 6; Page 50-51; 59pp; English.

XX The invention relates to human protein C derivatives and nucleic acid
 CC molecules encoding such derivatives. These derivatives have increased
 CC anticoagulation activity, resistance to serpin inactivation and increased
 CC sensitivity to thrombin activation compared to wild type protein C, and
 CC retains the biological activity of the wild type human protein C. Protein
 CC C derivatives are useful in the manufacture of a medicament for the
 CC treatment of acute coronary syndromes e.g. myocardial infarction and
 CC unstable angina; and disease states predisposing to thrombosis; vascular
 CC occlusive disorders and hypercoagulable states e.g. disseminated
 CC intravascular coagulation (DIC), burns, transplantations, thalassemia,
 CC sickle cell disease, viral haemorrhagic fever and haemolytic uremic
 CC syndrome; sepsis in combination with bacterial permeability increasing
 CC protein; thrombotic disorders in combination with an anti-platelet agent;
 CC protein C deficiency; acute arterial thrombotic occlusion,
 CC thromboembolism or stenosis in coronary, cerebral or peripheral arteries
 CC or in vascular grafts in combination with a thrombolytic agent. Nucleic
 CC acid molecules of the invention are useful for treating humans with
 CC genetically predisposed prothrombotic disorders by gene therapy. The
 CC present sequence is human protein C derivative

SQ Sequence 419 AA;

Query Match 98.5%; Score 2288; DB 4; Length 419;
 Best Local Similarity 98.6%; Pred. No. 6.7e-141;
 Matches 413; Conservative 2; Mismatches 4; Indels 0; Gaps 0;

QY 1 ANSFLEELRHSLERECIEICDFEAKETIFONVDTLAFMSKIVDSQCLVPLEHPCA 60
 DB 1 ANSFLEELRHSLERECIEICDFEAKETIFEDVDTLAFMSKIVDSQCLVPLEHPCA 60
 QY 61 SLCCGHGTCIDIGSGPSDCRSGWGRFCQREVSFLNCSLDNGGCTHYCLEEVGRRCSC 120
 DB 61 SLCCGHGTCIDIGSGPSDCRSGWGRFCQREVSFLNCSLDNGGCTHYCLEEVGRRCSC 120
 QY 121 AFGYKLGDDLLQCHPAVKEPCGRPMKMEKESHLKRDTEDEQVFPRLIKGKMTRRGD 180
 DB 121 AFGYKLGDDLLQCHPAVKEPCGRPMKMEKESHLKRDTEDEQVFPRLIKGKMTRRGD 180
 QY 181 SPWQVTLDSKKKLAGAVLIHPSWVLTAAHOMDESKLVLGEYDLRMEKELDDI 240
 DB 181 SPWQVTLDSKKKLAGAVLIHPSWVLTAAHOMDESKLVLGEYDLRMEKELDDI 240
 QY 241 KEVFAHPNYSKSTTDNDIALHLAOPATLSQTIIVICLPDSGLARELNOAGETLVYGM 300
 DB 241 KEVFAHPNYSKSTTDNDIALHLAOPATLSQTIIVICLPDSGLARELNOAGETLVYGM 300
 QY 301 GYHSREKEAKRNRTFVINFIKIPVPHNCEVMSNMYSENMLCAGILGDDQACEGDS 360
 DB 301 GYHSREKEAKRNRTFVINFIKIPVPHNCEVMSNMYSENMLCAGILGDDQACEGDS 360
 QY 361 GGPWVASFHGTWFLVGLVSWGBCGLLHNYGYTKVSRYLWIHGHIRDEKAPQKSNAP 419
 DB 361 GGPWVASFHGTWFLVGLVSWGBCGLLHNYGYTKVSRYLWIHGHIRDEKAPQKSNAP 419

RESULT 140

AAE08628
 ID AAE08628 standard; protein; 419 AA.

AC AAE08628;
 DT 01-NOV-2001 (first entry)
 DE Human protein C derivative #2.

KW Human; protein C derivative; anticoagulation activity; thrombosis;
 KW sepsin inactivation; acute coronary syndrome; myocardial infarction;
 KW vascular occlusive disorder; hypercoagulable state; angina; sepsis;
 KW disseminated intravascular coagulation; DIC; burn; transplantation;
 KW sickle cell disease; viral haemorrhagic fever; protein C deficiency;
 KW haemolytic uremic syndrome; acute arterial thrombotic occlusion;
 KW thromboembolism; prothrombotic disorder; gene therapy; thalassaemia.
 OS Homo sapiens.
 PN WC00159084-A1.
 PD 16-AUG-2001.
 PF 02-FEB-2001; 2001WO-US001221.
 ER 11-FEB-2000; 2000US-0181948P.
 ER 14-MAR-2000; 2000US-0189199P.
 XX (ELIL) LILLY & CO ELI.
 PA
 XX
 PI Gerlitz BE, Grinnell BW, Jones BE;
 XX
 XX WPI; 2001-514662/56.
 DR N-PEDB; AAD15226.
 XX
 XX Protein C derivative for treating acute coronary syndromes, vascular
 PT occlusive disorders, thrombotic disorders and sepsis, comprises
 PT substitutions at specified amino acid positions.
 PS
 PS Claim 4; Page 47-48; 59pp; English.
 XX
 XX The invention relates to human protein C derivatives and nucleic acid
 CC molecules encoding such derivatives. These derivatives have increased
 CC anticoagulation activity, resistance to sepsin inactivation and increased
 CC sensitivity to thrombin activation compared to wild type protein C, and
 CC retains the biological activity of the wild type human protein C. Protein
 CC C derivatives are useful in the manufacture of a medicament for the
 CC treatment of acute coronary syndromes e.g. myocardial infarction and
 CC unstable angina; and disease states predisposing to thrombosis; vascular
 CC occlusive disorders and hypercoagulable states e.g. disseminated
 CC intravascular coagulation (DIC), burns, transplantations, thalassaemia,
 CC sickle cell disease, viral haemorrhagic fever and haemolytic uremic
 CC syndrome; sepsis in combination with bacterial permeability increasing
 CC protein; thrombotic disorders in combination with an anti-platelet agent;
 CC protein C deficiency; acute arterial thrombotic occlusion,
 CC thromboembolism or stenosis in coronary, cerebral or peripheral arteries
 CC or in vascular grafts in combination with a thrombolytic agent. Nucleic
 CC acid molecules of the invention are useful for treating humans with
 CC genetically predisposed prothrombotic disorders by gene therapy. The
 CC present sequence is human protein C derivative
 XX
 SQ Sequence 419 AA.
 Query Match 98.4%; Score 2286; DB 4; Length 419;
 Best Local Similarity 98.3%; Pred. No. 9e-141;
 Matches 412; Conservative 3; Mismatches 4; Indels 0; Gaps 0;
 QY 1 ANSLFETIRHSSIRECTERICDPEFAKIFONVDTLAFNSKHYDGGQCTVPLEHPQCA 60
 DB 1 ANSLFETIRHSSIRECTERICDPEFAKIFEDVDVTLAFNSKHYDGGQCTVPLEHPQCA 60
 QY 61 SLCCGHTCTIDGIGSFCDRCSGWEGRFQAREVSFLNCSLDNGGCTHYCLEEVGNRRCSG 120
 DB 61 SLCCGHTCTIDGIGSFCDRCSGWEGRFQAREVSFLNCSLDNGGCTHYCLEEVGNRRCSG 120
 QY 121 APGYKAGDILLQCHFAVVFPCGRPMKMKKSHLKRTEPDQDQVFPRLIKGQTRRGD 180
 DB 121 APGYKAGDILLQCHFAVVFPCGRPMKMKKSHLKRTEPDQDQVFPRLIKGQTRRGD 180
 QY 161 SPQOVVLLDSKKKACGAVLTHPSWVLTAAHCMDSSKLLVRLGEVDLAPRKEMELDDI 240
 DB 161 SPQOVVLLDSKKKACGAVLTHPSWVLTAAHCMDSSKLLVRLGEVDLAPRKEMELDDI 240

QY 241 KEVFVHPNYSKSTDDIALHLIAPATLSQITVPLCLPDSGLAREELNAGQETLVYGM 300
 DB 241 KEVFVHPNYSKSTDDIALHLIAPATLSQITVPLCLPDSGLAREELNAGQETLVYGM 300
 QY 301 GYHSSEKKAENKRTFYANFIKIPVPHNECEVMSNMVSNLCAGLIGRQACGSGS 360
 DB 301 GYHSSEKKAENKRTFYANFIKIPVPHNECEVMSNMVSNLCAGLIGRQACGSGS 360
 QY 361 GGPWVASFHGTWFLVGLVSWGEGCGILHNYGYTKVSRYLDMTHGIRDKAPQKSNAP 419
 DB 361 GGPWVASFHGTWFLVGLVSWGEGCGILHNYGYTKVSRYLDMTHGIRDKAPQKSNAP 419

RESULT 141
 ID ADC40012
 XX ADC40012 standard; protein; 410 AA.
 AC
 XX ADC40012;
 AC
 XX 18-DEC-2003 (first entry)
 DT
 XX
 DE Human activated protein C-related protein #1.
 XX
 XX human; activated protein C; APC; thrombotic disorder;
 KW intravascular coagulation; thrombotic stroke; deep vein thrombosis;
 KW pulmonary embolism; peripheral arterial thrombosis;
 KW acute myocardial infarction; retina thrombosis.
 XX
 OS Homo sapiens.
 XX
 XX WC003075834-A2.
 XX
 PD 18-SEP-2003.
 PD
 PF 27-FEB-2003; 2003WO-US005046.
 PF
 ER 08-MAR-2002; 2002US-0363364P.
 ER
 PA (ELIL) LILLY & CO ELI.
 PI Gopalrauhnam G, Huang L, Riggin RM, Shelliga TA;
 XX
 XX WPI; 2003-722308/68.
 DR
 XX
 PT Pharmaceutical composition comprising activated protein C and a chelating
 PT agent useful for treating thrombotic disorders such as stroke, deep vein
 PT thrombosis, pulmonary embolism and myocardial infarction.
 PS
 PS Disclosure; SEQ ID NO 1; 29pp; English.
 XX
 XX The invention comprises a pharmaceutical composition containing activated
 CC protein C (APC), a chelating agent and optionally a diluent. The
 CC composition of the invention is useful for treating thrombotic disorders,
 CC such as: intravascular coagulation, thrombotic stroke, deep vein
 CC thrombosis, pulmonary embolism, peripheral arterial thrombosis, acute
 CC myocardial infarction and retina thrombosis. The present amino acid
 CC sequence represents a human protein that was used in the exemplification
 CC of the invention.
 XX
 SQ Sequence 410 AA.
 Query Match 98.1%; Score 2281; DB 7; Length 410;
 Best Local Similarity 100.0%; Pred. No. 1.9e-140;
 Matches 410; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
 QY 10 HSLERECTIEICDPEFAKIFONVDTLAFNSKHYDGGQCTVPLEHPQASLCCGHTC 69
 DB 1 HSLERECTIEICDPEFAKIFONVDTLAFNSKHYDGGQCTVPLEHPQASLCCGHTC 69
 QY 70 IDGIGSFCDRCSGWEGRFQAREVSFLNCSLDNGGCTHYCLEEVGNRRCSGAPGYKAGD 129
 DB 61 IDGIGSFCDRCSGWEGRFQAREVSFLNCSLDNGGCTHYCLEEVGNRRCSGAPGYKAGD 129

QY 130 LQGPAYKPCGRPKMEKKRSHLRDTEDEQDVDPRLIDGKMTTRGDSPMQVYLLD 189
 DB 121 LQGPAYKPCGRPKMEKKRSHLRDTEDEQDVDPRLIDGKMTTRGDSPMQVYLLD 180
 QY 190 SKKLACGAVLIHPSWVLTAAHOMDESCKLVRLGEYDLARMEKMLDLDIXEVFVHPNY 249
 DB 181 SKKLACGAVLIHPSWVLTAAHOMDESCKLVRLGEYDLARMEKMLDLDIXEVFVHPNY 240
 QY 250 SKSTDDNDIALHLAQPATLSQTTVPICLPDSGLAERELNQAQETLVTGNGYHSSEKKA 309
 DB 241 SKSTDDNDIALHLAQPATLSQTTVPICLPDSGLAERELNQAQETLVTGNGYHSSEKKA 300
 QY 310 AKRNTFVLPNFIKIPVVPNECESEVMSNMVSCAGILIGDRDACAEGDSGPMVASFH 369
 DB 301 AKRNTFVLPNFIKIPVVPNECESEVMSNMVSCAGILIGDRDACAEGDSGPMVASFH 360
 QY 370 TWPLVGLVSWGEGCGILHNYGVYTKVSRYLDMIGHIRDXEAPQKSMAP 419
 DB 361 TWPLVGLVSWGEGCGILHNYGVYTKVSRYLDMIGHIRDXEAPQKSMAP 410

RESULT 142

ADC40013
 ID ADC40013 standard; protein; 409 AA.

AC ADC40013;

DT 18-DEC-2003 (first entry)

DE Human activated protein C-related protein #2.

KW human; activated protein C; APC; thrombotic disorder;

KW intravascular coagulation; thrombotic stroke; deep vein thrombosis;

KW pulmonary embolism; peripheral arterial thrombosis;

KW acute myocardial infarction; retina thrombosis.

OS Homo sapiens.

PN WO2003075834-A2.

PD 18-SEP-2003.

PF 27-FEB-2003; 2003WO-US005046.

PR 08-MAR-2002; 2002US-036364P.

PA (EHLI) LILLY & CO ELI.

PI Gopalrathnam G, Huang L, Riggin RM, Sheliga TA;

DR WPI; 2003-722308/68.

PS Disclosure; SEQ ID NO 2; 29pp; English.

CC The invention comprises a pharmaceutical composition containing activated
 CC protein C (APC), a chelating agent and optionally a diluent. The
 CC composition of the invention is useful for treating thrombotic disorders,
 CC such as: intravascular coagulation, thrombotic stroke, deep vein
 CC thrombosis, pulmonary embolism, peripheral arterial thrombosis, acute
 CC myocardial infarction and retina thrombosis. The present amino acid
 CC sequence represents a human protein that was used in the exemplification
 CC of the invention.

SQ Sequence 409 AA;

Query Match 97.7%; Score 2270; DB 7; Length 409;
 Best local similarity 99.8%; Pred. No. 9,66-140;
 Matches 408; Conservative 1; Mismatches 0; Indels 0; Gaps 0;

QY 11 SSIERECIEEICPEBAKEIFQNVDDTLAFWSKRVDSQCLVLELHPKASLCCGHGTCT 70
 DB 1 SSIERECIEEICPEBAKEIFQNVDDTLAFWSKRVDSQCLVLELHPKASLCCGHGTCT 60
 QY 71 DGIGSFSCDCRSWGEGFQREVSEFLNCSLDNGGCTHYCLBEVGRKSCAPGYKLGDDL 130
 DB 61 DGIGSFSCDCRSWGEGFQREVSEFLNCSLDNGGCTHYCLBEVGRKSCAPGYKLGDDL 120
 QY 131 LQGPAYKPCGRPKMEKKRSHLRDTEDEQDVDPRLIDGKMTTRGDSPMQVYLLD 190
 DB 121 LQGPAYKPCGRPKMEKKRSHLRDTEDEQDVDPRLIDGKMTTRGDSPMQVYLLD 180
 QY 191 SKKLACGAVLIHPSWVLTAAHOMDESCKLVRLGEYDLARMEKMLDLDIXEVFVHPNY 250
 DB 181 SKKLACGAVLIHPSWVLTAAHOMDESCKLVRLGEYDLARMEKMLDLDIXEVFVHPNY 240
 QY 251 SKSTDDNDIALHLAQPATLSQTTVPICLPDSGLAERELNQAQETLVTGNGYHSSEKKA 310
 DB 241 SKSTDDNDIALHLAQPATLSQTTVPICLPDSGLAERELNQAQETLVTGNGYHSSEKKA 300
 QY 311 AKRNTFVLPNFIKIPVVPNECESEVMSNMVSCAGILIGDRDACAEGDSGPMVASFH 370
 DB 301 AKRNTFVLPNFIKIPVVPNECESEVMSNMVSCAGILIGDRDACAEGDSGPMVASFH 360
 QY 371 TWPLVGLVSWGEGCGILHNYGVYTKVSRYLDMIGHIRDXEAPQKSMAP 419
 DB 361 TWPLVGLVSWGEGCGILHNYGVYTKVSRYLDMIGHIRDXEAPQKSMAP 409

RESULT 143

AAR13623
 ID AAR13623 standard; protein; 460 AA.

AC AAR13623;

DT 25-MAR-2003 (revised)

DT 09-JAN-2003 (revised)

DT 31-OCT-1991 (first entry)

DE Human Protein C zymogen SC.

KW HPC mutant; pro drug; intravascular coagulation; zymogen.

OS Homo sapiens.

FT Key Location/Qualifiers
 FT Region 198..199
 FT /label= Lys-Arg dipeptide

PN EP443875-A.

PD 28-AUG-1991.

PF 22-FEB-1991; 91EP-00301450.

PR 23-FEB-1990; 90US-00484133.

PA (EHLI) LILLY & CO ELI.

PI Gerlitz BE, Grimmel BW;

DR WPI; 1991-254444/35.

CC Recombinant mutants of human protein C - having aminoacid changes for
 CC increased sensitivity to activation by thrombin and thrombin-
 CC thrombomodulin complex.

PS Disclosure; Page 12 and Table 1; 67pp; English.

CC Protein C Zymogen SC comprises a signal peptide and propeptide of a gamma
 CC -carboxylated secreted protein, the light chain of HPC, a basic dipeptide
 CC (i.e. Lys-Arg, but can also be Arg-Lys, Lys-Lys or Arg-Arg) and amino

CC acid residues 200-461 of HPC but with Ile(213) deleted and with Asp(203),
 CC Glu(204), Glu(205), Asp(206), Val(208), Asp(209), Leu(212) and Asp(214).
 CC replaced by Leu, His, Lys, Leu, Thr, Tyr, Thr and Asn, respectively. The
 CC zymogen can be activated in vivo by thrombin alone (even in the presence
 CC of calcium) and is more susceptible to activation by
 CC thrombin/thrombomodulin than native HPC zymogen. Zymogen SC can be
 CC administered as a pro drug useful in prevention and treatment of diseases
 CC involving intravascular coagulation. It can also be given to
 CC thrombocytopenic patients with invasive cancers with effective and
 CC intensive chemotherapy. See also AAR1357-40. (Updated on 09-JAN-2003 to
 CC add missing OS field.) (Updated on 25-MAR-2003 to correct FA field.)
 CC XX
 SQ Sequence 460 AA;

Query Match 97.1%; Score 2257.5; DB 2; Length 460;
 Best Local Similarity 97.9%; Pred. No. 7e-139; 6; Indels 1; Gaps 1;
 Matches 410; Conservative 2; Mismatches 6;

QY 1 ANSFLEELRHSLSRECEIEICDPFEAKETIFQVNDTLAFMSKHYVDGDCVLPLEHPCA 60
 Db 43 ANSFLEELRHSLSRECEIEICDPFEAKETIFQVNDTLAFMSKHYVDGDCVLPLEHPCA 102
 QY 61 SLCCGHTCTIDIGSFSCDCRSGMBGRFCQREVSFLNCSLDNGGCTHYCLEEVGRRCSC 120
 Db 103 SLCCGHTCTIDIGSFSCDCRSGMBGRFCQREVSFLNCSLDNGGCTHYCLEEVGRRCSC 162
 QY 121 APGYKGDLDLQCHPAVPCGRPMKREKRSKSLKRDTEQEDQVDPRLIDGKMTRRGD 180
 Db 163 APGYKGDLDLQCHPAVPCGRPMKREKRSKSLKRDTEQEDQVDPRLIDGKMTRRGD 221
 QY 181 SPWQVYLLDSKKKLAGAVLIHPSWVLTAAHCDSSKGLVRLGEYDLRRMKKMLDLDI 240
 Db 222 SPWQVYLLDSKKKLAGAVLIHPSWVLTAAHCDSSKGLVRLGEYDLRRMKKMLDLDI 281
 QY 241 KEVYVHPNYSKSTTNDIALHLAQPATLSQITVPCLPDSGLARELNQAGQETLVYTW 300
 Db 282 KEVYVHPNYSKSTTNDIALHLAQPATLSQITVPCLPDSGLARELNQAGQETLVYTW 341
 QY 301 GYHSSREKAKRNRTFVNFIKIPVPHNECSFVMSNMVSENMLCAGILGDRQDACEGDS 360
 Db 342 GYHSSREKAKRNRTFVNFIKIPVPHNECSFVMSNMVSENMLCAGILGDRQDACEGDS 401
 QY 361 GGPWVASFHGTWFLVGLVSWGEGGLLHNYGYTVKSRYLDMTHGHIRDKAPQKSWAP 419
 Db 402 GGPWVASFHGTWFLVGLVSWGEGGLLHNYGYTVKSRYLDMTHGHIRDKAPQKSWAP 460

RESULT 144
 AAP93714
 ID AAP93714 standard; protein; 461 AA.
 XX
 AC AAP93714;
 XX
 DT 25-MAR-2003 (revised)
 DT 04-JUN-1990 (first entry)
 XX
 DE Hybrid protein of protein-C and Factor-X.
 XX
 KW Fusion protein; anticoagulant; protein-C; Factor-X; Gla domain; se.
 XX
 OS Homo sapiens.
 XX
 Key Location/Qualifiers
 FT Peptide 1..40
 FT /label= signal_peptide
 XX
 FM EP296413-A.
 XX
 PD 28-DEC-1988.
 XX
 PF 09-JUN-1988; 88EP-00109186.
 XX
 PR 12-JUN-1987; 87JP-00145293.

PR 09-JUN-1988; 88JP-00140558.
 XX
 PA (FANH) HOECHST JAPAN LTD.
 XX
 FI Iwasaki W, Takahashi W, Hashimoto T;
 XX
 DR WPI: 1989-000910/01.
 DR N-PSDB; AAN91063.
 XX
 PT Hybrid protein of protein C with replaced Gla domain - using human
 PT vitamin-K dependent proteins, e.g. factor X, to give improved
 PT anticoagulation activity.
 XX
 PS Disclosure; Page 16-19; 23pp; English.
 XX
 XX The sequence is that of a fusion protein in which the Gla domain of
 CC protein is replaced with that of Factor X. The novel protein has a more
 CC potent anticoagulation activity than protein-C and is expected to have
 CC competitive inhibitory activity against menadione dependent blood
 CC coagulation proteins. It also has neutralization activity against
 CC plasminogen activation inhibitor, and inactivates Factor-Va or Factor-
 CC VIIa. (Updated on 25-MAR-2003 to correct PR field.) (Updated on 25-MAR-
 CC 2003 to correct PR field.)
 CC XX
 SQ Sequence 461 AA;

Query Match 96.6%; Score 2244; DB 1; Length 461;
 Best Local Similarity 95.7%; Pred. No. 5.3e-138;
 Matches 401; Conservative 9; Mismatches 9; Indels 0; Gaps 0;

QY 1 ANSFLEELRHSLSRECEIEICDPFEAKETIFQVNDTLAFMSKHYVDGDCVLPLEHPCA 60
 Db 41 ANSFLEELRHSLSRECEIEICDPFEAKETIFQVNDTLAFMSKHYVDGDCVLPLEHPCA 100
 QY 61 SLCCGHTCTIDIGSFSCDCRSGMBGRFCQREVSFLNCSLDNGGCTHYCLEEVGRRCSC 120
 Db 101 SLCCGHTCTIDIGSFSCDCRSGMBGRFCQREVSFLNCSLDNGGCTHYCLEEVGRRCSC 160
 QY 121 APGYKGDLDLQCHPAVPCGRPMKREKRSKSLKRDTEQEDQVDPRLIDGKMTRRGD 180
 Db 161 APGYKGDLDLQCHPAVPCGRPMKREKRSKSLKRDTEQEDQVDPRLIDGKMTRRGD 220
 QY 181 SPWQVYLLDSKKKLAGAVLIHPSWVLTAAHCDSSKGLVRLGEYDLRRMKKMLDLDI 240
 Db 221 SPWQVYLLDSKKKLAGAVLIHPSWVLTAAHCDSSKGLVRLGEYDLRRMKKMLDLDI 280
 QY 241 KEVYVHPNYSKSTTNDIALHLAQPATLSQITVPCLPDSGLARELNQAGQETLVYTW 300
 Db 281 KEVYVHPNYSKSTTNDIALHLAQPATLSQITVPCLPDSGLARELNQAGQETLVYTW 340
 QY 301 GYHSSREKAKRNRTFVNFIKIPVPHNECSFVMSNMVSENMLCAGILGDRQDACEGDS 360
 Db 341 GYHSSREKAKRNRTFVNFIKIPVPHNECSFVMSNMVSENMLCAGILGDRQDACEGDS 400
 QY 361 GGPWVASFHGTWFLVGLVSWGEGGLLHNYGYTVKSRYLDMTHGHIRDKAPQKSWAP 419
 Db 401 GGPWVASFHGTWFLVGLVSWGEGGLLHNYGYTVKSRYLDMTHGHIRDKAPQKSWAP 459

RESULT 145
 AAM72753
 ID AAM72753 standard; protein; 419 AA.
 XX
 AC AAM72753;
 XX
 DT 08-JAN-1999 (first entry)
 XX
 DE Primary structure of activated human protein C.
 XX
 KW Human; activated protein C; primary structure; autodegradation;
 KW purification; processing; intravascular coagulation; thrombotic stroke;
 KW deep vein thrombosis; pulmonary embolism; peripheral arterial thrombosis;
 KW emboli; heart; peripheral artery; acute myocardial infarction;

	Query Match	95.1%	Score 2210;	DB 2;	Length 419;
	Best Local Similarity	95.7%	Pred. No. 7.8e-136;		
	Matches 401;	Conservative 0;	Mismatches 18;	Indels 0;	Gaps 0
QY	1 ANSFLBELHSHSLRECEIEICDPEEAKKIFQVVDITLAFMSKHVDGQCLVPLEHPCA	60			
Db	1 ANSFLBELHSHSLRRCIEIEICDPEEAKKIFQVVDITLAFMSKHVDGQCLVPLEHPCA	60			
QY	61 SLCCGCGTCIDIGSSRSCDSCGSGRRFCQRFYSLNCSIDNGCGHYGLSEYGRRCSC	120			
Db	61 SLCCGCGTCIDIGSSRSCDSCGSGRRFCQRFYSLNCSIDNGCGHYGLSEYGRRCSC	120			
QY	121 APGKAGDILLQCHPAYPEFCGRPWKMEKKRSKHLKRTLEDQEDQVPLIDGKTERGD	180			
Db	121 APGKAGDILLQCHPAYPEFCGRPWKMEKKRSKHLKRTLEDQEDQVPLIDGKTERGD	180			
QY	181 SPWQVVLDSKKKLACAVILHPSWTLTAACHDESKLLVRLGEFDLPRMKWELDDI	240			
Db	181 SPWQVVLDSKKKLACAVILHPSWTLTAACHDESKLLVRLGEFDLPRMKWELDDI	240			
QY	241 KEVYVHNYSKSTIDNDIALHLAOPATLSOTVPCIPDSGLABRLNQAQETLVYGM	300			
Db	241 KEVYVHNYSKSTIDNDIALHLAOPATLSOTVPCIPDSGLABRLNQAQETLVYGM	300			
QY	301 GYHSSREKAKNRTFVIANFIKIPVPHNECSSEVMSNMVSENNLCAGILGDRQACSDS	360			
Db	301 GYHSSREKAKNRTFVIANFIKIPVPHNECSSEVMSNMVSENNLCAGILGDRQACSDS	360			
QY	361 GGPWVASFPGTWFVLGVWSGCGCLLNNYQTYXSRYLWHIGHIRDKKAPOKSNAP	419			
Db	361 GGPWVASFPGTWFVLGVWSGCGCLLNNYQTYXSRYLWHIGHIRDKKAPOKSNAP	419			
RESULT 146					
ID	AA013083	standard; protein, 509 AA.			
AC	AA013083;				
XX					
DT	25-MAR-2003	(revised)			
DI	30-SEP-1991	(first entry)			
XX					
DE	PAB-I-protein C fusion construct.				
XX					
KM	Phospholipid; binding protein; lipocortin; domain; vitamin K; PBP.				
XX	gla-domain; YMDP.				
XX					
OS	Homo sapiens.				
XX					
EH	Key	Location/Qualifiers			
FT	Protein	1..136			
FT		/label= PAB-I			
FT		/note= "amino acids 1-136"			
FT	Protein	137..509			
FT		/label= protein C			
FT		/note= "amino acids 46-136"			
XX					

PN W09109953-A.
XX 11-JUL-1991.
XX
XX 29-DEC-1989; 89US-00459082.
XX
XX 29-DEC-1989; 89US-00459082.
XX
XX (ZYMO) ZYMOGENETICS INC.
XX
XX Foster DC;
XX PI
XX MPI; 1991-222905/30.
XX N-PSDB; AAQ12680.
XX
XX Recombinant prodn. of hybrid phospholipid-binding proteins - comprising
PT lipocortin phospholipid-binding domain and vitamin-K-dependent protein.
XX
XX Claim 20; Page 41; 57pp; English.
XX
XX The fusion was constructed using site-directed mutagenesis to fuse PAP-I
CC encoding amino acid 1-136 with a protein C DNA sequence at the codon for
CC amino acid 46. A plasmid congy. this construct was transfected into BHK
CC cells which were then cultured to produce PAP-I-protein C fusions which
CC were activated to a form fully active in both amidolytic and
CC anticomagant assays. See also AAQ12678-81. (Updated on 25-MAR-2003 to
CC correct RA field.)
XX
XX Sequence 509 AA;
SQ
Query Match 89.7%; Score 2085; DB 2; Length 509;
Best Local Similarity 91.4%; Pred. No. 1,3e-127;
Matches 383; Conservative 9; Mismatches 17; Indels 10; Gaps 3;
QY 7 ELRHS-----SLRECEIEICDF--BEAKELFQNVDDTLAFMSKIVDGDQCLVPLEHPC 59
DB 94 ELKHALKAGTNEKXLTETILASRTPELRAIQYEBE--YSSLDGQCLVPLEHPC 150
QY 60 ASLCCGHGTCITGIGSFSCDRSGMGRFCQREVSFLNCSLDNGGCTHYCLEEYGMRRCS 119
DB 151 ASLCCGHGTCITGIGSFSCDRSGMGRFCQREVSFLNCSLDNGGCTHYCLEEYGMRRCS 210
QY 120 CAPGYKLGDDLLQCHPAVKPCGPRPKMEKKRSHLRDTEDEQDVPRLLDGKMTRRSG 179
DB 211 CAPGYKLGDDLLQCHPAVKPCGPRPKMEKKRSHLRDTEDEQDVPRLLDGKMTRRSG 270
QY 180 DSPWQVLLDSKKKLACGAVLIHPSWVLTAAHCHDESCKLLVRLGEYDLRRMEKELDLD 239
DB 271 DSPWQVLLDSKKKLACGAVLIHPSWVLTAAHCHDESCKLLVRLGEYDLRRMEKELDLD 330
QY 240 IKEYFVHNPKSTTNDNDIALHLAQPATLSQTIPTICLPDSGLARELNQAGQETLYMG 299
DB 331 IKEYFVHNPKSTTNDNDIALHLAQPATLSQTIPTICLPDSGLARELNQAGQETLYMG 390
QY 300 WGYHSREKAKRNTFVLANFIKIPVPHNECSYVSNMVSNNLCAGILGRQDACEGD 359
DB 391 WGYHSREKAKRNTFVLANFIKIPVPHNECSYVSNMVSNNLCAGILGRQDACEGD 450
QY 360 SGGPWVASFHGTWFLVGLVSWGSGCLLNHYGYTKVSRYLIDNHGIRDKXAPQKSWA 418
DB 451 SGGPWVASFHGTWFLVGLVSWGSGCLLNHYGYTKVSRYLIDNHGIRDKXAPQKSWA 509

RESULT 147

AAV49558
ID AAV49558 standard; protein; 356 AA.
AC AAV49558;
XX
XX 13-JAN-2000 (first entry)
XX Human protein C protein sequence.
XX

KM Human; coding sequence polymorphism; vascular pathology gene;
KM polymorphic site; phenotype correlation; forensic; paternity testing;
KM medicine; genetic analysis; vascular disease.
XX
XX Homo sapiens.
XX
XX W09950454-A2.
XX
XX 07-OCT-1999.
XX
XX 26-MAR-1999; 99MO-US006473.
XX
XX 01-APR-1998; 98US-00054272.
XX
XX (WHEED) WHITEHEAD INST BIOMEDICAL RES.
XX
XX Lander ES, Daley GQ, Gargill M, Ireland US, Rozen SG;
XX
XX MPI; 1999-620066/53.
XX N-PSDB; AAZ32167.
XX
XX Determination of polymorphisms in genes, especially those identifying
PT predisposition to vascular disease.
XX
XX Disclosure; Fig 11; 134pp; English.
XX
XX AAZ32159 to AAZ32194 represent reference alleles for specifically claimed
CC nucleic acid sequences from the present invention which comprise
CC polymorphic sites as given in a table in the specification, selected from
CC 92 single nucleotide polymorphisms in which the nucleotide at the
CC polymorphic site is different from a nucleotide at the same site in a
CC reference allele. The nucleic acids, and primers and probes, are used to
CC identify polymorphisms, which may predispose an individual to disease,
CC especially a vascular disease. They can also be used in phenotype
CC correlations, forensic, paternity testing, medicine or genetic analysis.
CC AA49550 to AAV49573 represent the proteins which correspond to some of
CC the reference alleles
XX
SQ Sequence 356 AA;
Query Match 84.9%; Score 1972; DB 2; Length 356;
Best Local Similarity 100.0%; Pred. No. 2e-120;
Matches 355; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
QY 65 GGGCTCIGIGSFSCDRSGMGRFCQREVSFLNCSLDNGGCTHYCLEEYGMRRCSGAGY 124
DB 2 GGGCTCIGIGSFSCDRSGMGRFCQREVSFLNCSLDNGGCTHYCLEEYGMRRCSGAGY 61
QY 125 KLGDLLQCHPAVKPCGPRPKMEKKRSHLRDTEDEQDVPRLLDGKMTRRSGSPWQ 184
DB 62 KLGDLLQCHPAVKPCGPRPKMEKKRSHLRDTEDEQDVPRLLDGKMTRRSGSPWQ 121
QY 185 VYLLDSKKKLACGAVLIHPSWVLTAAHCHDESCKLLVRLGEYDLRRMEKELDLDIKEYF 244
DB 122 VYLLDSKKKLACGAVLIHPSWVLTAAHCHDESCKLLVRLGEYDLRRMEKELDLDIKEYF 181
QY 245 VHPNYSKSTTNDNDIALHLAQPATLSQTIPTICLPDSGLARELNQAGQETLYMGYHS 304
DB 182 VHPNYSKSTTNDNDIALHLAQPATLSQTIPTICLPDSGLARELNQAGQETLYMGYHS 241
QY 305 SREKAKRNTFVLANFIKIPVPHNECSYVSNMVSNNLCAGILGRQDACEGSGGGM 364
DB 242 SREKAKRNTFVLANFIKIPVPHNECSYVSNMVSNNLCAGILGRQDACEGSGGGM 301
QY 365 VASFHGTWFLVGLVSWGSGCLLNHYGYTKVSRYLIDNHGIRDKXAPQKSWAP 419
DB 302 VASFHGTWFLVGLVSWGSGCLLNHYGYTKVSRYLIDNHGIRDKXAPQKSWAP 356

RESULT 148

AAI12196
ID AAI12196 standard; protein; 262 AA.
XX

AC AAR12196;
 XX
 DT 25-MAR-2003 (revised)
 XX 09-JUL-1991 (first entry)
 DE Human protein C catalytic domain mutant E(213)->R.
 XX
 KM Anticoagulant; phlebotrombosis.
 XX
 OS Homo sapiens.
 XX
 FH Key
 FT Peptide
 FT Disulfide-bond 27..54
 FT Active-site 42
 FT Disulfide-bond 174..188
 FT Active-site 191
 FT Disulfide-bond 199..227
 FT Region 213
 FT /label= E replaced by R
 XX
 PN JP03072877-A.
 XX
 PD 28-MAR-1991.
 XX
 PR 10-AUG-1989; 89JP-00205698.
 XX
 PR 10-AUG-1989; 89JP-00205698.
 XX
 PA (TEIJ) TEIJIN LTD.
 XX
 DR WPI; 1991-136309/19.
 XX
 PT Activated human protein C deriv. and DNA encoding it - has prolonged
 PT blood half life for use as an anticoagulant.
 XX
 PS Claim 1; Fig 1; 15pp; Japanese.
 XX
 CC The mutant has a prolonged half-life in blood compared with natural
 CC activated human protein C. Alternative positions for substituents are
 CC Asp(20), Lys(22), Lys(23), Asp(45), Lys(48), Lys(490), Asp(182),
 CC Arg(183), Asp(185) and Trp(211). The amino acid is replaced with an
 CC oppositely charged residue. The active site amino acids, His(42),
 CC Asp(88), and Ser(191) must be present. See also AAR11838 and AAR12192-
 CC R12195. (Updated on 25-MAR-2003 to correct PA field.)
 XX
 SQ Sequence 262 AA;
 XX
 Query Match 60.6%; Score 1409; DB 2; Length 262;
 Best Local Similarity 99.2%; Pred. No. 5,8e-84;
 Matches 260; Conservative 0; Mismatches 2; Indels 0; Gaps 0;
 QY 158 DTEQEDQVDPRLIDGKMTTRGDSPPQVLLDSKKKLAGAVLIHPSWVLTAAHOMDESK 217
 DB 1 DTEQEDQVDPRLIDGKMTTRGDSPPQVLLDSKKKLAGAVLIHPSWVLTAAHOMDESK 60
 QY 218 KLVRLGEYDLRRMEKWELEDDIKEYFVHPNYSKSTNDNDIALHQAQATLSQTIYPIC 277
 DB 61 KLVRLGEYDLRRMEKWELEDDIKEYFVHPNYSKSTNDNDIALHQAQATLSQTIYPIC 120
 QY 278 LPDSGLAERELNQAQETLVYTGWGHSSREKAKRNTFVLFNFKIPVPHNECSSEVSN 337
 DB 121 LPDSGLAERELNQAQETLVYTGWGHSSREKAKRNTFVLFNFKIPVPHNECSSEVSN 180
 QY 338 WVSSENMICAGIIGDRQDACBGDSGGPMVASFHGTWFLVGLVSWGSCGGLHNYGVYTKVS 397
 DB 181 WVSSENMICAGIIGDRQDACBGDSGGPMVASFHGTWFLVGLVSWGSCGGLHNYGVYTKVS 240
 QY 398 RYLMWTHGHTRDKAPQKSNAP 419
 DB 241 RYLMWTHGHTRDKAPQKSNAP 262

RESULT 149
 ID AAR12193
 XX AAR12193 standard; protein; 262 AA.
 XX
 AC AAR12193;
 XX
 DT 25-MAR-2003 (revised)
 XX 09-JUL-1991 (first entry)
 DE Human protein C catalytic domain mutant R(183)->D.
 XX
 KM Anticoagulant; phlebotrombosis.
 XX
 OS Homo sapiens.
 XX
 FH Key
 FT Peptide
 FT Disulfide-bond 27..54
 FT Active-site 42
 FT Disulfide-bond 174..188
 FT Region 183
 FT Active-site 191
 FT Disulfide-bond 199..227
 FT /label= R replaced by D
 XX
 PN JP03072877-A.
 XX
 PD 28-MAR-1991.
 XX
 PR 10-AUG-1989; 89JP-00205698.
 XX
 PR 10-AUG-1989; 89JP-00205698.
 XX
 PA (TEIJ) TEIJIN LTD.
 XX
 DR WPI; 1991-136309/19.
 XX
 PT Activated human protein C deriv. and DNA encoding it - has prolonged
 PT blood half life for use as an anticoagulant.
 XX
 PS Claim 1; Fig 1; 15pp; Japanese.
 XX
 CC The mutant has a prolonged half-life in blood compared with natural
 CC activated human protein C. Alternative positions for substituents are
 CC Asp(20), Lys(22), Lys(23), Asp(45), Lys(48), Lys(490), and
 CC Asp(185), Trp(211) and Glu(213). The amino acid is replaced with an
 CC oppositely charged residue. The active site amino acids, His(42),
 CC Asp(88), and Ser(191) must be present. See also AAR11838 and AAR12192-
 CC R12196. (Updated on 25-MAR-2003 to correct PA field.)
 XX
 SQ Sequence 262 AA;
 XX
 Query Match 60.5%; Score 1407; DB 2; Length 262;
 Best Local Similarity 99.2%; Pred. No. 7.9e-84;
 Matches 260; Conservative 0; Mismatches 2; Indels 0; Gaps 0;
 QY 158 DTEQEDQVDPRLIDGKMTTRGDSPPQVLLDSKKKLAGAVLIHPSWVLTAAHOMDESK 217
 DB 1 DTEQEDQVDPRLIDGKMTTRGDSPPQVLLDSKKKLAGAVLIHPSWVLTAAHOMDESK 60
 QY 218 KLVRLGEYDLRRMEKWELEDDIKEYFVHPNYSKSTNDNDIALHQAQATLSQTIYPIC 277
 DB 61 KLVRLGEYDLRRMEKWELEDDIKEYFVHPNYSKSTNDNDIALHQAQATLSQTIYPIC 120
 QY 278 LPDSGLAERELNQAQETLVYTGWGHSSREKAKRNTFVLFNFKIPVPHNECSSEVSN 337
 DB 121 LPDSGLAERELNQAQETLVYTGWGHSSREKAKRNTFVLFNFKIPVPHNECSSEVSN 180
 QY 338 WVSSENMICAGIIGDRQDACBGDSGGPMVASFHGTWFLVGLVSWGSCGGLHNYGVYTKVS 397

Db 181 MSENMLCAGILGDDQACEGSGGPMVAFPHGTWFLVGLVSWGEGCGLLHNVGYTKVS 240
 QY 398 RYLDWIHGHIRDKEAPQKSWAP 419
 Db 241 RYLDWIHGHIRDKEAPQKSWAP 262

RESULT 150

AA11838
 ID AA11838 standard; peptide; 262 AA.

XX
 AC AA11838;
 XX
 DT 25-MAR-2003 (revised)
 DT 09-JUL-1991 (first entry)
 XX

DE Human protein C catalytic domain mutant D(45)->R.

XX Anticoagulant; phlebotrombosis.

XX Homo sapiens.

XX Key Location/Qualifiers

FT Peptide 1..12

FT Disulfide-bond 27..54

FT Region 42

FT Active-site 42

FT Active-site 88

FT Disulfide-bond 174..188

FT Active-site 191

FT Disulfide-bond 199..227

XX JP03072877-A.

XX PD 28-MAR-1991.

XX PF 10-AUG-1989; 89JP-00205698.

XX PR 10-AUG-1989; 89JP-00205698.

XX PA (TEIJ) TEIJIN LTD.

XX WPI; 1991-136309/19.

XX Activated human protein C deriv. and DNA encoding it - has prolonged

XX blood half life for use as an anticoagulant.

XX Claim 1; Fig 1; 15pp; Japanese.

XX The mutant has a prolonged half-life in blood compared with natural

XX activated human protein C. Alternative positions for substns. are

XX Asp(120), Lys(123), Lys(124), Lys(48), Lys(490), Asp(182) and

XX Arg(183), Asp(185), Trp(211) and Glu(213). The amino acid is replaced

XX with an oppositely charged residue. The active site amino acids, His(42),

XX Asp(68), and Ser(191) must be present. See also AA12192-R12196. (Updated

XX on 25-MAR-2003 to correct PA field.)

XX Sequence 262 AA;

XX SQ

Query Match 60.5%; Score 1406; DB 2; Length 262;

Best Local Similarity 99.2%; Pred. No. 9.1e-84;

Matches 260; Conservative 0; Mismatches 2; Indels 0; Gaps 0;

QY 158 DTEDQDQVDPRLIDGKMTRRGDSFQGVLLDSKKKLAQAVLIHPSWVLTAAHQMDSK 217

Db 1 DTEDQDQVDPRLIDGKMTRRGDSFQGVLLDSKKKLAQAVLIHPSWVLTAAHQMDSK 60

QY 218 KLVPLGSEYDLRRWEKMELDLDIKVFAHPNYSKSTTNDIALHLAQPATLSQTIYVIC 277

Db 61 KLVPLGSEYDLRRWEKMELDLDIKVFAHPNYSKSTTNDIALHLAQPATLSQTIYVIC 120

QY 278 LPDSGLARELNQAGQETLVYWGVSREKEAKRNTFVLNFIKIPVPHNECSYWSN 337
 Db 121 LPDSGLARELNQAGQETLVYWGVSREKEAKRNTFVLNFIKIPVPHNECSYWSN 180
 QY 338 MSENMLCAGILGDDQACEGSGGPMVAFPHGTWFLVGLVSWGEGCGLLHNVGYTKVS 397
 Db 181 MSENMLCAGILGDDQACEGSGGPMVAFPHGTWFLVGLVSWGEGCGLLHNVGYTKVS 240
 QY 398 RYLDWIHGHIRDKEAPQKSWAP 419
 Db 241 RYLDWIHGHIRDKEAPQKSWAP 262

Search completed: June 14, 2004, 17:48:23
 Job time : 69 secs

/ CURRENT APPLICATION NUMBER: US/10/182,263
/ CURRENT FILING DATE: 2002-07-22
/ PRIOR APPLICATION NUMBER: 60/181948
/ PRIOR FILING DATE: 2002-02-11
/ PRIOR APPLICATION NUMBER: 60/189199
/ PRIOR FILING DATE: 2000-03-14
/ NUMBER OF SEQ ID NOS: 12
/ SOFTWARE: PatentIn version 3.1
/ SEQ ID NO: 6
/ LENGTH: 419
/ TYPE: PRT
/ ORGANISM: Homo sapiens
/ US-10-182-263-6

Query Match 98.5%; Score 2288; DB 4; Length 419;
Best Local Similarity 98.6%; Pred. No. 1e-187;
Matches 413; Conservative 2; Mismatches 4; Indels 0; Gaps 0;

QY 1 ANSFLELRHSSLERECIERICDFEAKETPQNYVDTLAFMSKHYDGDCLVPLEHPCA 60
DB 1 ANSFLELRHSSLERECIERICDFEAKETPQNYVDTLAFMSKHYDGDCLVPLEHPCA 60
QY 61 SLCCGHCITDGTGSGCDRSGWBFRCQREVSFLNCSLDNGGCTHYCLEEVGMRCSC 120
DB 61 SLCCGHCITDGTGSGCDRSGWBFRCQREVSFLNCSLDNGGCTHYCLEEVGMRCSC 120
QY 121 APGYKLGDDLQCHPAVKPCGRPWKMEKRSLSLRKDEDEQDVDPRLIDKMTREGD 180
DB 121 APGYKLGDDLQCHPAVKPCGRPWKMEKRSLSLRKDEDEQDVDPRLIDKMTREGD 180
QY 181 SPWQVVLDSKKKLACCAVLIHPSVLTAAHQMDESCKLIVRLGEYDLRRERKELDLDI 240
DB 181 SPWQVVLDSKKKLACCAVLIHPSVLTAAHQMDESCKLIVRLGEYDLRRERKELDLDI 240
QY 241 KEFVHPNYSKSTTDNDIALHLAOPATLSQTIPTCLPDSGLARELNQAGQETLVTSW 300
DB 241 KEFVHPNYSKSTTDNDIALHLAOPATLSQTIPTCLPDSGLARELNQAGQETLVTSW 300
QY 301 GYHSREKAKAKNTFVLPNFKLPVPHNECSEVMNVSNNMLCAGILGRDACEGDS 360
DB 301 GYHSREKAKAKNTFVLPNFKLPVPHNECSEVMNVSNNMLCAGILGRDACEGDS 360
QY 361 GGPVVASFHGTWFLVGLVSWGEGCLLHNYGVYTKYSRYLDWTHGHIRDKEAPQKSWAP 419
DB 361 GGPVVASFHGTWFLVGLVSWGEGCLLHNYGVYTKYSRYLDWTHGHIRDKEAPQKSWAP 419

Search completed: June 2, 2004, 16:58:16
Job time : 28 secs

Best Local Similarity 98.6%; Pred. No. 5.3e-188;
Matches 413; Conservative 3; Mismatches 3; Indels 0; Gaps 0;

```
QY 1 ANSFLELRHSLSRECEIEICDFEAKELFQVNDTLAFMSKHYDQCLVPLBHPCA 60
DB 43 ANSFLELRHSLSRECEIEICDFEAKELFQVNDTLAFMSKHYDQCLVPLBHPCA 102
QY 61 SLCCGHTCIDIGISFSCDCRSQWEGRCFCQREVSLNCSLNDGCTHYCLBEVGRRCSC 120
DB 103 SLCCGHTCIDIGISFSCDCRSQWEGRCFCQREVSLNCSLNDGCTHYCLBEVGRRCSC 162
QY 121 APGYLGDLLQCHPAVKPCGRPMKMKKSHKRDTEDEQVDFPRLIDKMTRRGD 180
DB 163 APGYLGDLLQCHPAVKPCGRPMKMKKSHKRDTEDEQVDFPRLIDKMTRRGD 222
QY 181 SPQVVLDSKKKLAGAVLIHPSWVLTAAHCDMSKLLVLAGEDLRMEKMELDLDI 240
DB 223 SPQVVLDSKKKLAGAVLIHPSWVLTAAHCDMSKLLVLAGEDLRMEKMELDLDI 282
QY 241 KEVFAHPNYSKSTTDNDIALHLAQPATLSQTIYVCLPDSGLARELNQAGETLYTGW 300
DB 283 KEVFAHPNYSKSTTDNDIALHLAQPATLSQTIYVCLPDSGLARELNQAGETLYTGW 342
QY 301 GHSSREKAKRNTFTVNFIKIPVPHNECSVMNSNMICAGILGDRQDACEGDS 360
DB 343 GHSSREKAKRNTFTVNFIKIPVPHNECSVMNSNMICAGILGDRQDACEGDS 402
QY 361 GGPVVASFHGTWFLVGLVSMGEGCGLHNVGYTVHSRYLDMIGHIRDEKAPQKSNAP 419
DB 403 GGPVVASFHGTWFLVGLVSMGEGCGLHNVGYTVHSRYLDMIGHIRDEKAPQKSNAP 461
```

RESULT 13
5270178-18
Patent No. 5270178
APPLICANT: GERLITZ, BRUCE E.; GRINNELL, BRIAN W.
TITLE OF INVENTION: VECTORS AND COMPOUNDS FOR EXPRESSION OF
ZYMOGEN FORMS OF HUMAN PROTEIN C
NUMBER OF SEQUENCES: 21
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/07/484,133
FILING DATE: 23-FEB-1990
SEQ ID NO:18
LENGTH: 461
5270178-18

Query Match 98.6%; Score 2292; DB 6; Length 461;
Best Local Similarity 98.6%; Pred. No. 5.3e-188;
Matches 413; Conservative 3; Mismatches 3; Indels 0; Gaps 0;

```
QY 1 ANSFLELRHSLSRECEIEICDFEAKELFQVNDTLAFMSKHYDQCLVPLBHPCA 60
DB 43 ANSFLELRHSLSRECEIEICDFEAKELFQVNDTLAFMSKHYDQCLVPLBHPCA 102
QY 61 SLCCGHTCIDIGISFSCDCRSQWEGRCFCQREVSLNCSLNDGCTHYCLBEVGRRCSC 120
DB 103 SLCCGHTCIDIGISFSCDCRSQWEGRCFCQREVSLNCSLNDGCTHYCLBEVGRRCSC 162
QY 121 APGYLGDLLQCHPAVKPCGRPMKMKKSHKRDTEDEQVDFPRLIDKMTRRGD 180
DB 163 APGYLGDLLQCHPAVKPCGRPMKMKKSHKRDTEDEQVDFPRLIDKMTRRGD 222
QY 181 SPQVVLDSKKKLAGAVLIHPSWVLTAAHCDMSKLLVLAGEDLRMEKMELDLDI 240
DB 223 SPQVVLDSKKKLAGAVLIHPSWVLTAAHCDMSKLLVLAGEDLRMEKMELDLDI 282
QY 241 KEVFAHPNYSKSTTDNDIALHLAQPATLSQTIYVCLPDSGLARELNQAGETLYTGW 300
DB 283 KEVFAHPNYSKSTTDNDIALHLAQPATLSQTIYVCLPDSGLARELNQAGETLYTGW 342
QY 301 GHSSREKAKRNTFTVNFIKIPVPHNECSVMNSNMICAGILGDRQDACEGDS 360
DB 343 GHSSREKAKRNTFTVNFIKIPVPHNECSVMNSNMICAGILGDRQDACEGDS 402
```

QY 361 GGPVVASFHGTWFLVGLVSMGEGCGLHNVGYTVHSRYLDMIGHIRDEKAPQKSNAP 419
DB 403 GGPVVASFHGTWFLVGLVSMGEGCGLHNVGYTVHSRYLDMIGHIRDEKAPQKSNAP 461

RESULT 14
US-10-182-263-3
Sequence 3, Application US/10182263
Patent No. 6630138
GENERAL INFORMATION:
APPLICANT: Gerlitz, Bruce E
APPLICANT: Jones, Bryan E
APPLICANT: Grinnell, Brian W
TITLE OF INVENTION: PROTEIN C DERIVATIVES
FILE REFERENCE: X-13611
CURRENT APPLICATION NUMBER: US/10/182,263
CURRENT FILING DATE: 2002-07-22
PRIOR APPLICATION NUMBER: 60/181948
PRIOR FILING DATE: 2002-02-11
PRIOR APPLICATION NUMBER: 60/189199
PRIOR FILING DATE: 2000-03-14
NUMBER OF SEQ ID NOS: 12
SOFTWARE: PatentIn version 3.1
SEQ ID NO 3
LENGTH: 419
TYPE: PRT
ORGANISM: Homo sapiens
US-10-182-263-3

Query Match 98.5%; Score 2290; DB 4; Length 419;
Best Local Similarity 98.6%; Pred. No. 7e-188;
Matches 413; Conservative 2; Mismatches 4; Indels 0; Gaps 0;

```
QY 1 ANSFLELRHSLSRECEIEICDFEAKELFQVNDTLAFMSKHYDQCLVPLBHPCA 60
DB 1 ANSFLELRHSLSRECEIEICDFEAKELFQVNDTLAFMSKHYDQCLVPLBHPCA 60
QY 61 SLCCGHTCIDIGISFSCDCRSQWEGRCFCQREVSLNCSLNDGCTHYCLBEVGRRCSC 120
DB 61 SLCCGHTCIDIGISFSCDCRSQWEGRCFCQREVSLNCSLNDGCTHYCLBEVGRRCSC 120
QY 121 APGYLGDLLQCHPAVKPCGRPMKMKKSHKRDTEDEQVDFPRLIDKMTRRGD 180
DB 121 APGYLGDLLQCHPAVKPCGRPMKMKKSHKRDTEDEQVDFPRLIDKMTRRGD 180
QY 181 SPQVVLDSKKKLAGAVLIHPSWVLTAAHCDMSKLLVLAGEDLRMEKMELDLDI 240
DB 181 SPQVVLDSKKKLAGAVLIHPSWVLTAAHCDMSKLLVLAGEDLRMEKMELDLDI 240
QY 241 KEVFAHPNYSKSTTDNDIALHLAQPATLSQTIYVCLPDSGLARELNQAGETLYTGW 300
DB 241 KEVFAHPNYSKSTTDNDIALHLAQPATLSQTIYVCLPDSGLARELNQAGETLYTGW 300
QY 301 GHSSREKAKRNTFTVNFIKIPVPHNECSVMNSNMICAGILGDRQDACEGDS 360
DB 301 GHSSREKAKRNTFTVNFIKIPVPHNECSVMNSNMICAGILGDRQDACEGDS 360
QY 361 GGPVVASFHGTWFLVGLVSMGEGCGLHNVGYTVHSRYLDMIGHIRDEKAPQKSNAP 419
DB 361 GGPVVASFHGTWFLVGLVSMGEGCGLHNVGYTVHSRYLDMIGHIRDEKAPQKSNAP 419
```

RESULT 15
US-10-182-263-6
Sequence 6, Application US/10182263
Patent No. 6630138
GENERAL INFORMATION:
APPLICANT: Gerlitz, Bruce E
APPLICANT: Jones, Bryan E
APPLICANT: Grinnell, Brian W
TITLE OF INVENTION: PROTEIN C DERIVATIVES
FILE REFERENCE: X-13611

GENERAL INFORMATION:
APPLICANT: Garner, Ian
APPLICANT: Cottingham, Ian R.
APPLICANT: Temperley, Simon M.
APPLICANT: Foster, Donald C.
APPLICANT: Sprecher, Cindy A.
APPLICANT: Prunkard, Donna E.
TITLE OF INVENTION: PROTEIN C PRODUCTION IN TRANSGENIC
TITLE OF INVENTION: ANIMALS
NUMBER OF SEQUENCES: 25
CORRESPONDENCE ADDRESS:
ADDRESSEE: ZymoGenetics, Inc.
STREET: 1201 Eastlake Avenue East
CITY: Seattle
STATE: WA
COUNTRY: USA
ZIP: 98102
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patent Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/756,506
FILING DATE:
CLASSIFICATION: 800
ATTORNEY/AGENT INFORMATION:
NAME: Sawistak, Deborah A
REGISTRATION NUMBER: 37,438
REFERENCE/DOCKET NUMBER: 95-28
TELECOMMUNICATION INFORMATION:
TELEPHONE: 206-442-6672
TELEFAX: 206-442-6678
INFORMATION FOR SEQ ID NO: 4:
SEQUENCE CHARACTERISTICS:
LENGTH: 460 amino acids
TYPE: amino acid
TOPOLOGY: linear
MOLECULE TYPE: protein
US-08-756-506-4

Query Match 99.7%; Score 2317; DB 2; Length 460;
Best Local Similarity 100.0%; Pred. No. 3.9e-190;
Matches 418; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Db 1 ANSFLEELRRHSLEKCEIEICDPEEAKETPQVDDTLAFMSKXVDGQCLVPLEHPCA 60
43 ANSFLEELRRHSLEKCEIEICDPEEAKETPQVDDTLAFMSKXVDGQCLVPLEHPCA 102

QY 61 SLCCGHGTCIDIGISFSCDCRSWGEGRFQREVSFLNCSLDNGCTHYCLEEVGWRCS 120
DB 103 SLCCGHGTCIDIGISFSCDCRSWGEGRFQREVSFLNCSLDNGCTHYCLEEVGWRCS 162

QY 121 AGGYLGDLLQCHPAVYKPCGRPKMKMKRSHLKRTEQOEQVDPRLIDGKTRRGD 180
DB 163 AGGYLGDLLQCHPAVYKPCGRPKMKMKRSHLKRTEQOEQVDPRLIDGKTRRGD 222

QY 181 SPQVYVLLDSKKLLAGAVLHPSSVLTAAHCDKSKLLVRLGEYDLRRMEKMLDDI 240
DB 223 SPQVYVLLDSKKLLAGAVLHPSSVLTAAHCDKSKLLVRLGEYDLRRMEKMLDDI 282

QY 241 KEVFNHPVSKSTTNDIALHLAQPATLSQTVIPCLPDSGLAERLNOAGQETLVYGM 300
DB 283 KEVFNHPVSKSTTNDIALHLAQPATLSQTVIPCLPDSGLAERLNOAGQETLVYGM 342

QY 301 GHSSREKREARNTTVLNFIKIPVPNHCSEWMSNMVSNMCAIGLGRDACEGDS 360
DB 343 GHSSREKREARNTTVLNFIKIPVPNHCSEWMSNMVSNMCAIGLGRDACEGDS 402

QY 361 GGPVAVSHGTHWFLVGLVSGGCGLLHNTGYVTKSRYLDMIGHIRDRKAPQKSWA 418
DB 403 GGPVAVSHGTHWFLVGLVSGGCGLLHNTGYVTKSRYLDMIGHIRDRKAPQKSWA 460

RESULT 11
US-10-182-263-5
Sequence 5, Application US/10182263
Patent No. 6630138
GENERAL INFORMATION:
APPLICANT: Gerlitz, Bruce E
APPLICANT: Jones, Bryan E
APPLICANT: Grinnell, Brian W
TITLE OF INVENTION: PROTEIN C DERIVATIVES
FILE REFERENCE: X-13611
CURRENT APPLICATION NUMBER: US/10/182,263
CURRENT FILING DATE: 2002-07-22
PRIOR APPLICATION NUMBER: 60/181948
PRIOR FILING DATE: 2002-02-11
PRIOR APPLICATION NUMBER: 60/189199
PRIOR FILING DATE: 2000-03-14
NUMBER OF SEQ ID NOS: 12
SOFTWARE: Patent version 3.1
SEQ ID NO 5
LENGTH: 419
TYPE: PRT
ORGANISM: Homo sapiens
US-10-182-263-5

Query Match 98.8%; Score 2296; DB 4; Length 419;
Best Local Similarity 98.8%; Pred. No. 2.2e-188;
Matches 414; Conservative 2; Mismatches 3; Indels 0; Gaps 0;

QY 1 ANSFLEELRRHSLEKCEIEICDPEEAKETPQVDDTLAFMSKXVDGQCLVPLEHPCA 60
DB 1 ANSFLEELRRHSLEKCEIEICDPEEAKETPQVDDTLAFMSKXVDGQCLVPLEHPCA 60

QY 61 SLCCGHGTCIDIGISFSCDCRSWGEGRFQREVSFLNCSLDNGCTHYCLEEVGWRCS 120
DB 61 SLCCGHGTCIDIGISFSCDCRSWGEGRFQREVSFLNCSLDNGCTHYCLEEVGWRCS 120

QY 121 AGGYLGDLLQCHPAVYKPCGRPKMKMKRSHLKRTEQOEQVDPRLIDGKTRRGD 180
DB 121 AGGYLGDLLQCHPAVYKPCGRPKMKMKRSHLKRTEQOEQVDPRLIDGKTRRGD 180

QY 181 SPQVYVLLDSKKLLAGAVLHPSSVLTAAHCDKSKLLVRLGEYDLRRMEKMLDDI 240
DB 181 SPQVYVLLDSKKLLAGAVLHPSSVLTAAHCDKSKLLVRLGEYDLRRMEKMLDDI 240

QY 241 KEVFNHPVSKSTTNDIALHLAQPATLSQTVIPCLPDSGLAERLNOAGQETLVYGM 300
DB 241 KEVFNHPVSKSTTNDIALHLAQPATLSQTVIPCLPDSGLAERLNOAGQETLVYGM 300

QY 301 GHSSREKREARNTTVLNFIKIPVPNHCSEWMSNMVSNMCAIGLGRDACEGDS 360
DB 301 GHSSREKREARNTTVLNFIKIPVPNHCSEWMSNMVSNMCAIGLGRDACEGDS 360

QY 361 GGPVAVSHGTHWFLVGLVSGGCGLLHNTGYVTKSRYLDMIGHIRDRKAPQKSWA 419
DB 361 GGPVAVSHGTHWFLVGLVSGGCGLLHNTGYVTKSRYLDMIGHIRDRKAPQKSWA 419

RESULT 12
5270178-17
Patent No. 5270178
APPLICANT: GERLITZ, BRUCE E.; GRINNELL, BRIAN W.
TITLE OF INVENTION: VECTORS AND COMPOUNDS FOR EXPRESSION OF
ZMOGEN FORMS OF HUMAN PROTEIN C
NUMBER OF SEQUENCES: 21
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/07/484,133
FILING DATE: 23-FEB-1990
SEQ ID NO: 17;
LENGTH: 461
5270178-17

Query Match 98.6%; Score 2292; DB 6; Length 461;

DB 283 KEVYHFNYSKSTTNDIALHLAOPATLSQTVPLCLPDSGLARELNQAGETLVWGM 342
QY 301 GHSSREKAKRNRTFVNFILKI PVVPHNECESEVMNMYSENNLCAGLIGRQDACEGDS 360
DB 343 GHSSREKAKRNRTFVNFILKI PVVPHNECESEVMNMYSENNLCAGLIGRQDACEGDS 402
QY 361 GGPWVASFHGTWFLVGLVSWGCGCLLHNYGYTVKYSRYLDMIGHIRDKRAPQKSWAP 419
DB 403 GGPWVASFHGTWFLVGLVSWGCGCLLHNYGYTVKYSRYLDMIGHIRDKRAPQKSWAP 461

RESULT 8

5460953-3
; Patent No. 5460953
; APPLICANT: GERLITZ, BRUCE B.; GRINNELL, BRIAN W.
; TITLE OF INVENTION: VECTORS AND COMPOUNDS FOR EXPRESSION OF
; GLYCOSYLATION MOTIFANTS OF HUMAN PROTEIN C
; NUMBER OF SEQUENCES: 3
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/93, 217
; FILING DATE: 09-SEP-1993
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: 628, 063
; FILING DATE: 21-DEC-1990
; APPLICATION NUMBER: 484, 081
; FILING DATE: 23-FEB-1990
; SEQ ID NO: 3
; LENGTH: 461
5460953-3

Query Match 99.7%; Score 2318; DB 6; Length 461;
Best Local Similarity 99.8%; Pred. No. 3.2e-190;
Matches 418; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 ANSPLEELRHSLRECEIEICDFEBAKEIQTNDITLAFMSKHYDGGQCLVPLPHPCA 60
DB 43 ANSPLEELRHSLRECEIEICDFEBAKEIQTNDITLAFMSKHYDGGQCLVPLPHPCA 102
QY 61 SLCCGHTCIGTIGSFSCDCRSGBGRCQREVSFLNCSLDNGGCTHYCLEVGMRRSC 120
DB 103 SLCCGHTCIGTIGSFSCDCRSGBGRCQREVSFLNCSLDNGGCTHYCLEVGMRRSC 162
QY 121 AFGYKLGDDLQCHPAVKFPCGRPMKMEKRSKSLKEDTEDQEDQVDPRLIDGKTRRD 180
DB 163 AFGYKLGDDLQCHPAVKFPCGRPMKMEKRSKSLKEDTEDQEDQVDPRLIDGKTRRD 222
QY 181 SPQOVVLLDSKKKLAAGAVLIHPSWVLTAAHOMDESCKLLVRIGEYDLRREKWEELDDI 240
DB 223 SPQOVVLLDSKKKLAAGAVLIHPSWVLTAAHOMDESCKLLVRIGEYDLRREKWEELDDI 282
QY 241 KEVYHFNYSKSTTNDIALHLAOPATLSQTVPLCLPDSGLARELNQAGETLVWGM 300
DB 283 KEVYHFNYSKSTTNDIALHLAOPATLSQTVPLCLPDSGLARELNQAGETLVWGM 342
QY 301 GHSSREKAKRNRTFVNFILKI PVVPHNECESEVMNMYSENNLCAGLIGRQDACEGDS 360
DB 343 GHSSREKAKRNRTFVNFILKI PVVPHNECESEVMNMYSENNLCAGLIGRQDACEGDS 402
QY 361 GGPWVASFHGTWFLVGLVSWGCGCLLHNYGYTVKYSRYLDMIGHIRDKRAPQKSWAP 419
DB 403 GGPWVASFHGTWFLVGLVSWGCGCLLHNYGYTVKYSRYLDMIGHIRDKRAPQKSWAP 461

RESULT 9

US-08-756-506-2
; Sequence 2, Application US/08756506
; Patent No. 5905185
; GENERAL INFORMATION:
; APPLICANT: Garner, Ian
; APPLICANT: Cottingham, Ian R.
; APPLICANT: Temperley, Simon M.
; APPLICANT: Foster, Donald C.

APPLICANT: Sprecher, Cindy A.
APPLICANT: Prunkard, Donna B.
TITLE OF INVENTION: PROTEIN C PRODUCTION IN TRANSGENIC
TITLE OF INVENTION: ANIMALS
NUMBER OF SEQUENCES: 25
CORRESPONDENCE ADDRESS:
ADDRESSER: Zymogenetics, Inc.
STREET: 1201 Eastlake Avenue East
CITY: Seattle
STATE: WA
COUNTRY: USA
ZIP: 98102

COMPUTER READABLE FORM:

MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/756,506
FILING DATE:
CLASSIFICATION: 800
ATTORNEY/AGENT INFORMATION:
NAME: Sawislak, Deborah A.
REGISTRATION NUMBER: 37,436
REFERENCE/DOCKET NUMBER: 95-28
TELECOMMUNICATION INFORMATION:
TELEPHONE: 206-442-6672
TELEFAX: 206-442-6678
INFORMATION FOR SEQ ID NO: 2:
SEQUENCE CHARACTERISTICS:
LENGTH: 460 amino acids
TYPE: amino acid
TOPOLOGY: linear
MOLECULE TYPE: protein

US-08-756-506-2

Query Match 99.7%; Score 2317; DB 2; Length 460;
Best Local Similarity 100.0%; Pred. No. 3.9e-190;
Matches 418; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 ANSPLEELRHSLRECEIEICDFEBAKEIQTNDITLAFMSKHYDGGQCLVPLPHPCA 60
DB 43 ANSPLEELRHSLRECEIEICDFEBAKEIQTNDITLAFMSKHYDGGQCLVPLPHPCA 102
QY 61 SLCCGHTCIGTIGSFSCDCRSGBGRCQREVSFLNCSLDNGGCTHYCLEVGMRRSC 120
DB 103 SLCCGHTCIGTIGSFSCDCRSGBGRCQREVSFLNCSLDNGGCTHYCLEVGMRRSC 162
QY 121 AFGYKLGDDLQCHPAVKFPCGRPMKMEKRSKSLKEDTEDQEDQVDPRLIDGKTRRD 180
DB 163 AFGYKLGDDLQCHPAVKFPCGRPMKMEKRSKSLKEDTEDQEDQVDPRLIDGKTRRD 222
QY 181 SPQOVVLLDSKKKLAAGAVLIHPSWVLTAAHOMDESCKLLVRIGEYDLRREKWEELDDI 240
DB 223 SPQOVVLLDSKKKLAAGAVLIHPSWVLTAAHOMDESCKLLVRIGEYDLRREKWEELDDI 282
QY 241 KEVYHFNYSKSTTNDIALHLAOPATLSQTVPLCLPDSGLARELNQAGETLVWGM 300
DB 283 KEVYHFNYSKSTTNDIALHLAOPATLSQTVPLCLPDSGLARELNQAGETLVWGM 342
QY 301 GHSSREKAKRNRTFVNFILKI PVVPHNECESEVMNMYSENNLCAGLIGRQDACEGDS 360
DB 343 GHSSREKAKRNRTFVNFILKI PVVPHNECESEVMNMYSENNLCAGLIGRQDACEGDS 402
QY 361 GGPWVASFHGTWFLVGLVSWGCGCLLHNYGYTVKYSRYLDMIGHIRDKRAPQKSWAP 418
DB 403 GGPWVASFHGTWFLVGLVSWGCGCLLHNYGYTVKYSRYLDMIGHIRDKRAPQKSWAP 460

RESULT 10

US-08-756-506-4
; Sequence 4, Application US/08756506
; Patent No. 5905185


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; LENGTH: 419 amino acids
; TYPE: AMINO ACID
; TOPOLOGY: linear
; MOLECULE TYPE: protein
; HYPOTHEICAL: NO
; ANTI-SENSE: NO
; FEATURE:
; NAME/KEY: Region
; LOCATION: 1..157
; OTHER INFORMATION: /note= "Protein C light Chain"
; FEATURE:
; NAME/KEY: Region
; LOCATION: 158..169
; OTHER INFORMATION: /note= "Protein C Activation"
; OTHER INFORMATION: Peptide"
; NAME/KEY: Region
; LOCATION: 170..419
; OTHER INFORMATION: /note= "Protein C Heavy Chain"
PCT-US92-10242-1

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Query Match 100.0%; Score 2324; DB 5; Length 419;
Best Local Similarity 100.0%; Pred. No. 8.7e-191;
Matches 419; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

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QY 1 ANSFLEIRHSLSERCEIEICDPEAKEIFQVNDTLAFWSKHVDGQCLVPLEHPCA 60
DB 1 ANSFLEIRHSLSERCEIEICDPEAKEIFQVNDTLAFWSKHVDGQCLVPLEHPCA 60
QY 61 SLCCGHTCIDIGSFSCDCRSWGEGRFCQREVSFLNCSLNDGCTHYCLEVWRRSC 120
DB 61 SLCCGHTCIDIGSFSCDCRSWGEGRFCQREVSFLNCSLNDGCTHYCLEVWRRSC 120
QY 121 ARGYKGDLDLQCHPAVKPCGRPMKMEKRSKSKRPTDQEDQVDPRLIDGKMTREGD 180
DB 121 ARGYKGDLDLQCHPAVKPCGRPMKMEKRSKSKRPTDQEDQVDPRLIDGKMTREGD 180
QY 181 SPQVVLDSKKKLAGAVLIHPSWVLTAAHCDSESKLVRGELYDRMEKMLDDI 240
DB 181 SPQVVLDSKKKLAGAVLIHPSWVLTAAHCDSESKLVRGELYDRMEKMLDDI 240
QY 241 KEVFPHPYKSTTDNDIALHLAOPATLSQTVPICLPDSGLARELNAGQETLVTVGW 300
DB 241 KEVFPHPYKSTTDNDIALHLAOPATLSQTVPICLPDSGLARELNAGQETLVTVGW 300
QY 301 GHSSREKEAKRNTFVNFILKIPVPHNECEWMSNNVSENNLCAGILGDRDACEGDS 360
DB 301 GHSSREKEAKRNTFVNFILKIPVPHNECEWMSNNVSENNLCAGILGDRDACEGDS 360
QY 361 GGPVVASFHGTWFLVGLVSWGEGCGLLHNTGVTTKYSRLDWTIGHIRDEKAPQKSNAP 419
DB 361 GGPVVASFHGTWFLVGLVSWGEGCGLLHNTGVTTKYSRLDWTIGHIRDEKAPQKSNAP 419

```

```

RESULT 6
US-10-182-263-2
; Sequence 2, Application US/10182263
; Patent No. 6630138
; GENERAL INFORMATION:
; APPLICANT: Gerltz, Bruce E
; APPLICANT: Jones, Bryan E
; APPLICANT: Grinnell, Brian W
; TITLE OF INVENTION: PROTEIN C DERIVATIVES
; FILE REFERENCE: X-13611
; CURRENT APPLICATION NUMBER: US/10/182,263
; PRIOR FILING DATE: 2002-07-22
; PRIOR APPLICATION NUMBER: 60/181948
; PRIOR FILING DATE: 2002-02-11
; PRIOR APPLICATION NUMBER: 60/189199
; NUMBER OF SEQ ID NOS: 12
; SOFTWARE: Patent version 3.1
; SEQ ID NO 2

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; LENGTH: 461
; TYPE: PRT
; ORGANISM: Homo sapiens
US-10-182-263-2

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Query Match 100.0%; Score 2324; DB 4; Length 461;
Best Local Similarity 100.0%; Pred. No. 9.8e-191;
Matches 419; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

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QY 1 ANSFLEIRHSLSERCEIEICDPEAKEIFQVNDTLAFWSKHVDGQCLVPLEHPCA 60
DB 43 ANSFLEIRHSLSERCEIEICDPEAKEIFQVNDTLAFWSKHVDGQCLVPLEHPCA 102
QY 61 SLCCGHTCIDIGSFSCDCRSWGEGRFCQREVSFLNCSLNDGCTHYCLEVWRRSC 120
DB 103 SLCCGHTCIDIGSFSCDCRSWGEGRFCQREVSFLNCSLNDGCTHYCLEVWRRSC 162
QY 121 ARGYKGDLDLQCHPAVKPCGRPMKMEKRSKSKRPTDQEDQVDPRLIDGKMTREGD 180
DB 163 ARGYKGDLDLQCHPAVKPCGRPMKMEKRSKSKRPTDQEDQVDPRLIDGKMTREGD 222
QY 181 SPQVVLDSKKKLAGAVLIHPSWVLTAAHCDSESKLVRGELYDRMEKMLDDI 240
DB 223 SPQVVLDSKKKLAGAVLIHPSWVLTAAHCDSESKLVRGELYDRMEKMLDDI 282
QY 241 KEVFPHPYKSTTDNDIALHLAOPATLSQTVPICLPDSGLARELNAGQETLVTVGW 300
DB 283 KEVFPHPYKSTTDNDIALHLAOPATLSQTVPICLPDSGLARELNAGQETLVTVGW 342
QY 301 GHSSREKEAKRNTFVNFILKIPVPHNECEWMSNNVSENNLCAGILGDRDACEGDS 360
DB 343 GHSSREKEAKRNTFVNFILKIPVPHNECEWMSNNVSENNLCAGILGDRDACEGDS 402
QY 361 GGPVVASFHGTWFLVGLVSWGEGCGLLHNTGVTTKYSRLDWTIGHIRDEKAPQKSNAP 419
DB 403 GGPVVASFHGTWFLVGLVSWGEGCGLLHNTGVTTKYSRLDWTIGHIRDEKAPQKSNAP 461

```

```

RESULT 7
5225537-2
; Patent No. 5225537
; APPLICANT: FOSTER, DONALD
; TITLE OF INVENTION: METHODS FOR PRODUCING HYBRID
; PHOSPHOLIPID-BINDING PROTEINS
; NUMBER OF SEQUENCES: 14
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/07/459,082
; FILING DATE: 29-DEC-1989
; SEQ ID NO: 2
; LENGTH: 461
5225537-2

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Query Match 100.0%; Score 2324; DB 6; Length 461;
Best Local Similarity 100.0%; Pred. No. 9.8e-191;
Matches 419; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

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QY 1 ANSFLEIRHSLSERCEIEICDPEAKEIFQVNDTLAFWSKHVDGQCLVPLEHPCA 60
DB 43 ANSFLEIRHSLSERCEIEICDPEAKEIFQVNDTLAFWSKHVDGQCLVPLEHPCA 102
QY 61 SLCCGHTCIDIGSFSCDCRSWGEGRFCQREVSFLNCSLNDGCTHYCLEVWRRSC 120
DB 103 SLCCGHTCIDIGSFSCDCRSWGEGRFCQREVSFLNCSLNDGCTHYCLEVWRRSC 162
QY 121 ARGYKGDLDLQCHPAVKPCGRPMKMEKRSKSKRPTDQEDQVDPRLIDGKMTREGD 180
DB 163 ARGYKGDLDLQCHPAVKPCGRPMKMEKRSKSKRPTDQEDQVDPRLIDGKMTREGD 222
QY 181 SPQVVLDSKKKLAGAVLIHPSWVLTAAHCDSESKLVRGELYDRMEKMLDDI 240
DB 223 SPQVVLDSKKKLAGAVLIHPSWVLTAAHCDSESKLVRGELYDRMEKMLDDI 282
QY 241 KEVFPHPYKSTTDNDIALHLAOPATLSQTVPICLPDSGLARELNAGQETLVTVGW 300

```

APPLICANT: Carlson, Andrew D
APPLICANT: Huang, Lihua
APPLICANT: Sheliga, Theodore A
TITLE OF INVENTION: Improved Methods for Processing Activated Protein C
FILE REFERENCE: X-111796A
CURRENT APPLICATION NUMBER: US/09/667,570A
CURRENT FILING DATE: 2000-09-21
PRIOR APPLICATION NUMBER: 60/045,255
PRIOR FILING DATE: 1997-04-28
NUMBER OF SEQ ID NOS: 3
SOFTWARE: PatentIn version 3.1
SEQ ID NO 3
LENGTH: 419
TYPE: PRT
ORGANISM: Homo sapiens
US-09-667-570A-3

Query Match 100.0%; Score 2324; DB 4; Length 419;
Best Local Similarity 100.0%; Pred. No. 8,7e-191;
Matches 419; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 ANSFLELHSLRECEIETCPFEBAKEIFQNVDDTLAFMKSHVDGQCLVPLEHPCA 60
1 ANSFLELHSLRECEIETCPFEBAKEIFQNVDDTLAFMKSHVDGQCLVPLEHPCA 60
DB 61 SLCCGHTCIDIGSFSCDSCSGMEGRFCQREVSFLNCSLDNGCTHYCLEBVMRCSG 120
QY 61 SLCCGHTCIDIGSFSCDSCSGMEGRFCQREVSFLNCSLDNGCTHYCLEBVMRCSG 120
DB 61 SLCCGHTCIDIGSFSCDSCSGMEGRFCQREVSFLNCSLDNGCTHYCLEBVMRCSG 120
QY 121 APGYKLGDDLLQCHPAVKPCGRPMWKKRSHLKQDEQDQVDPRLIDGKMTRRGD 180
121 APGYKLGDDLLQCHPAVKPCGRPMWKKRSHLKQDEQDQVDPRLIDGKMTRRGD 180
DB 121 APGYKLGDDLLQCHPAVKPCGRPMWKKRSHLKQDEQDQVDPRLIDGKMTRRGD 180
QY 181 SPWQVVLDSKKKLAAGAVLIHPSWVLTAAHQMBSKKLVRLGEYDLRREKWEILDLDI 240
181 SPWQVVLDSKKKLAAGAVLIHPSWVLTAAHQMBSKKLVRLGEYDLRREKWEILDLDI 240
DB 181 SPWQVVLDSKKKLAAGAVLIHPSWVLTAAHQMBSKKLVRLGEYDLRREKWEILDLDI 240
QY 241 KEVFAHNTSKSTTNDIALHLAOPATLSQTIYVICLPDSGLARELNQAGQETLVYTW 300
241 KEVFAHNTSKSTTNDIALHLAOPATLSQTIYVICLPDSGLARELNQAGQETLVYTW 300
DB 241 KEVFAHNTSKSTTNDIALHLAOPATLSQTIYVICLPDSGLARELNQAGQETLVYTW 300
QY 301 GYHSSREKAKNRTFVLIPIVVPVHNECSVMNVSNNLCAGLIGDRDACEGDS 360
301 GYHSSREKAKNRTFVLIPIVVPVHNECSVMNVSNNLCAGLIGDRDACEGDS 360
DB 301 GYHSSREKAKNRTFVLIPIVVPVHNECSVMNVSNNLCAGLIGDRDACEGDS 360
QY 361 GGPVWASFHGTWFLVGLVSWGEGCLHNYGYTKVSRVLDWTHGHIRKEAPQKSWAP 419
361 GGPVWASFHGTWFLVGLVSWGEGCLHNYGYTKVSRVLDWTHGHIRKEAPQKSWAP 419
DB 361 GGPVWASFHGTWFLVGLVSWGEGCLHNYGYTKVSRVLDWTHGHIRKEAPQKSWAP 419

RESULT 4

US-10-182-263-1
Sequence 1, Application US/10182263
Patent No. 6630138
GENERAL INFORMATION:
APPLICANT: Geilitz, Bruce E
APPLICANT: Jones, Bryan E
APPLICANT: Grinnell, Brian W
TITLE OF INVENTION: PROTEIN C DERIVATIVES
FILE REFERENCE: X-13611
CURRENT APPLICATION NUMBER: US/10/182,263
CURRENT FILING DATE: 2002-07-22
PRIOR APPLICATION NUMBER: 60/181948
PRIOR FILING DATE: 2002-02-11
PRIOR APPLICATION NUMBER: 60/189199
PRIOR FILING DATE: 2000-03-14
NUMBER OF SEQ ID NOS: 12
SOFTWARE: PatentIn version 3.1
SEQ ID NO 1
LENGTH: 419
TYPE: PRT
ORGANISM: Homo sapiens
US-10-182-263-1

Query Match 100.0%; Score 2324; DB 4; Length 419;
Best Local Similarity 100.0%; Pred. No. 8,7e-191;
Matches 419; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 ANSFLELHSLRECEIETCPFEBAKEIFQNVDDTLAFMKSHVDGQCLVPLEHPCA 60
1 ANSFLELHSLRECEIETCPFEBAKEIFQNVDDTLAFMKSHVDGQCLVPLEHPCA 60
DB 61 SLCCGHTCIDIGSFSCDSCSGMEGRFCQREVSFLNCSLDNGCTHYCLEBVMRCSG 120
QY 61 SLCCGHTCIDIGSFSCDSCSGMEGRFCQREVSFLNCSLDNGCTHYCLEBVMRCSG 120
DB 61 SLCCGHTCIDIGSFSCDSCSGMEGRFCQREVSFLNCSLDNGCTHYCLEBVMRCSG 120
QY 121 APGYKLGDDLLQCHPAVKPCGRPMWKKRSHLKQDEQDQVDPRLIDGKMTRRGD 180
121 APGYKLGDDLLQCHPAVKPCGRPMWKKRSHLKQDEQDQVDPRLIDGKMTRRGD 180
DB 121 APGYKLGDDLLQCHPAVKPCGRPMWKKRSHLKQDEQDQVDPRLIDGKMTRRGD 180
QY 181 SPWQVVLDSKKKLAAGAVLIHPSWVLTAAHQMBSKKLVRLGEYDLRREKWEILDLDI 240
181 SPWQVVLDSKKKLAAGAVLIHPSWVLTAAHQMBSKKLVRLGEYDLRREKWEILDLDI 240
DB 181 SPWQVVLDSKKKLAAGAVLIHPSWVLTAAHQMBSKKLVRLGEYDLRREKWEILDLDI 240
QY 241 KEVFAHNTSKSTTNDIALHLAOPATLSQTIYVICLPDSGLARELNQAGQETLVYTW 300
241 KEVFAHNTSKSTTNDIALHLAOPATLSQTIYVICLPDSGLARELNQAGQETLVYTW 300
DB 241 KEVFAHNTSKSTTNDIALHLAOPATLSQTIYVICLPDSGLARELNQAGQETLVYTW 300
QY 301 GYHSSREKAKNRTFVLIPIVVPVHNECSVMNVSNNLCAGLIGDRDACEGDS 360
301 GYHSSREKAKNRTFVLIPIVVPVHNECSVMNVSNNLCAGLIGDRDACEGDS 360
DB 301 GYHSSREKAKNRTFVLIPIVVPVHNECSVMNVSNNLCAGLIGDRDACEGDS 360
QY 361 GGPVWASFHGTWFLVGLVSWGEGCLHNYGYTKVSRVLDWTHGHIRKEAPQKSWAP 419
361 GGPVWASFHGTWFLVGLVSWGEGCLHNYGYTKVSRVLDWTHGHIRKEAPQKSWAP 419
DB 361 GGPVWASFHGTWFLVGLVSWGEGCLHNYGYTKVSRVLDWTHGHIRKEAPQKSWAP 419

RESULT 5

PCT-US92-10242-1
Sequence 1, Application PC/TUS9210242
GENERAL INFORMATION:
APPLICANT: Griffin, John H.
APPLICANT: Masters, Rolf
TITLE OF INVENTION: Serine Protease-Derived Polypeptides and
TITLE OF INVENTION: Anti-Peptide Antibodies, Systems and Therapeutic Methods
NUMBER OF SEQUENCES: 10
CORRESPONDENCE ADDRESS:
ADDRESSEE: Office of Patent Counsel, The Scripps
ADDRESSER: Research Institute
STREET: 10666 North Torrey Pines Road, TPC 8
CITY: La Jolla
STATE: CA
COUNTRY: USA
ZIP: 92037
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
OPERATING SYSTEM: IBM PC compatible
SOFTWARE: PatentIn Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: PCT/US92/10242
FILING DATE: 19921118
CLASSIFICATION:
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 07/793,989
FILING DATE: 18-NOV-1991
ATTORNEY/AGENT INFORMATION:
NAME: Fitting, Thomas
REGISTRATION NUMBER: 34,163
REFERENCE/DOCKET NUMBER: SCR0472P
TELECOMMUNICATION INFORMATION:
TELEPHONE: 619-554-2937
TELEFAX: 619-554-6312
INFORMATION FOR SEQ ID NO: 1:
SEQUENCE CHARACTERISTICS:

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/ OTHER INFORMATION: /note= "Protein C Light Chain"
/ FEATURE:
/ NAME/KEY: Region
/ LOCATION: 158..169 /note= "Protein C Activation"
/ OTHER INFORMATION:
/ OTHER INFORMATION: Peptide"
/ FEATURE:
/ NAME/KEY: Region
/ LOCATION: 170..419
/ OTHER INFORMATION: /note= "Protein C Heavy Chain"
US-08-295-411-1

Query Match
Best Local Similarity 100.0%; Score 2324; DB 1; Length 419;
Pred. No. 8.7e-191;
Matches 419; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 ANSFLELRHSSLERECEIEICDFEAKETIQNVDDTLAFWSKVDGQCLVPLEHPCA 60
DB 1 ANSFLELRHSSLERECEIEICDFEAKETIQNVDDTLAFWSKVDGQCLVPLEHPCA 60
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DB 61 SLCCGHGTCIDIGSFSFCDGRSGEGRFCQREVSFLNCSLDNGCTHYCLEBVGRRCSG 120
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/ Sequence 1, Application US/08955471
/ Patent No. 5968751
/ GENERAL INFORMATION:
/ APPLICANT: Griffin, John H.
/ APPLICANT: Westere, Rolf M.
/ TITLE OF INVENTION: Serine Protease-Derived Polypeptides and
/ TITLE OF INVENTION: Anti-Peptide Antibodies, Systems and Therapeutic Methods
/ NUMBER OF INVENTION: for Inhibiting Coagulation
/ NUMBER OF SEQUENCES: 10
/ CORRESPONDENCE ADDRESS:
/ ADDRESSEE: Office of Patent Counsel, The Scripps
/ ADDRESSEE: Research Institute
/ STREET: 10666 No. 5968751th Torrey Pines Road, TPC 8
/ CITY: La Jolla
/ STATE: CA
/ COUNTRY: USA
/ ZIP: 92037
/ COMPUTER READABLE FORM:
/ MEDIUM TYPE: Floppy disk
/ COMPUTER: IBM PC compatible
/ OPERATING SYSTEM: PC-DOS/MS-DOS
/ SOFTWARE: Patentin Release #1.0, Version #1.25
/ CURRENT APPLICATION DATA:
/ APPLICATION NUMBER: US/08/955,471
/ FILING DATE:
/ CLASSIFICATION:
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/ PRIOR APPLICATION DATA:
/ APPLICATION NUMBER: 08/295,411
/ FILING DATE:
/ CLASSIFICATION:
/ ATTORNEY/AGENT INFORMATION:
/ NAME: Fitting, Thomas
/ REGISTRATION NUMBER: 34,163
/ REFERENCE/DOCKET NUMBER: TSRT263.0C1
/ TELECOMMUNICATION INFORMATION:
/ TELEPHONE: 619-554-2937
/ TELEFAX: 619-554-6312
/ INFORMATION FOR SEQ ID NO: 1:
/ SEQUENCE CHARACTERISTICS:
/ LENGTH: 419 amino acids
/ TYPE: amino acid
/ TOPOLOGY: linear
/ MOLECULE TYPE: protein
/ HYPOTHETICAL: NO
/ ANTI-SENSE: NO
/ FEATURE:
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/ NAME/KEY: Region
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US-08-955-471-1

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Pred. No. 8.7e-191;
Matches 419; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

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DB 361 GGPWVASFHGTWFLVGLVSWGEGCLLHNYGVYTKVSRYLDMHIGHTRDEAPQKSWAP 419

RESULT 3
US-09-667-570A-3
/ Sequence 3, Application US/09667570A
/ Patent No. 6436397
/ GENERAL INFORMATION:
/ APPLICANT: Baker, Jeffrey C
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GenCore version 5.1.6
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OM protein - protein search, using sw model

Run on: June 2, 2004, 16:54:27 ; Search time 23 Seconds

(without alignments)
940,491 Million cell updates/sec

Title: US-09-997-623-4

Perfect score: 2324

Sequence: 1 ANSHLELRSLSLRECEIE.....LDWIGHIRDKAPQKSWAP 419

Scoring table: BLOSUM62

Gapop 10.0 , Gapext 0.5

Searched: 389414 seqs, 51625971 residues

Total number of hits satisfying chosen parameters: 389414

Minimum DB seq length: 0
Maximum DB seq length: 200000000

Post-processing: Minimum Match 0%

Maximum Match 100%
Listing first 45 summaries

Database :

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2: /cgn2_6/prodata/2/1aa/5B COMB pep:*
3: /cgn2_6/prodata/2/1aa/6A COMB pep:*
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Pred. No. is the number of results predicted by chance to have a
score greater than or equal to the score of the result being printed,
and is derived by analysis of the total score distribution.

SUMMARIES

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4	2324	100.0	419	4	US-10-182-263-1
5	2324	100.0	419	5	PCT-US92-10242-1
6	2324	100.0	461	4	US-10-182-263-2
7	2324	100.0	461	6	522537-2
8	2318	99.7	461	6	5460953-3
9	2317	99.7	460	2	US-08-756-506-2
10	2317	99.7	460	2	US-08-756-506-4
11	2296	98.8	419	4	US-10-182-263-5
12	2296	98.6	461	6	5270178-17
13	2292	98.6	461	6	5270178-18
14	2290	98.5	419	4	US-10-182-263-3
15	2288	98.5	419	4	US-10-182-263-6
16	2286.5	98.4	460	6	5270178-13
17	2286.5	98.4	460	6	5270178-14
18	2286	98.4	419	4	US-10-182-263-4
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23	2273	97.8	409	4	US-09-667-570A-2
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25	2244.5	96.6	460	6	5270178-16
26	1419	61.1	262	1	US-07-720-189-1
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28	1384.5	59.6	261	6	5270178-20	Patent No. 5270178
29	1354	58.3	250	3	US-08-944-483-51	Sequence 51, Appl
30	1346.5	57.9	261	6	5270178-21	Patent No. 5270178
31	1328.5	57.2	261	6	5270178-5	Patent No. 5270178
32	809.5	34.8	487	1	US-08-463-486-53	Sequence 53, Appl
33	809.5	34.8	487	2	US-08-463-658-53	Sequence 53, Appl
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35	809.5	34.8	492	2	US-08-463-658-2	Sequence 2, Appl
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37	807	34.7	448	1	US-08-295-411-3	Sequence 3, Appl
38	807	34.7	448	2	US-08-955-471-3	Sequence 3, Appl
39	807	34.7	448	5	PCT-US92-10242-3	Sequence 3, Appl
40	803	34.6	488	4	US-09-367-777-44	Sequence 44, Appl
41	803	34.6	488	4	US-09-367-791A-27	Sequence 27, Appl
42	783	33.7	406	1	US-08-295-411-5	Sequence 5, Appl
43	783	33.7	406	2	US-08-955-471-5	Sequence 5, Appl
44	783	33.7	406	5	PCT-US92-10242-5	Sequence 5, Appl
45	783	33.7	444	1	US-08-475-845-2	Sequence 2, Appl

ALIGNMENTS

RESULT 1
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; Sequence 1, Application US/08295411
; Patent No. 5679639
; GENERAL INFORMATION:
; APPLICANT: Griffin, John H.
; APPLICANT: Meesters, Rolf M.
; TITLE OF INVENTION: Serine Protease-Derived Polypeptides and
; TITLE OF INVENTION: Anti-Peptide Antibodies, Systems and Therapeutic Methods
; NUMBER OF SEQUENCES: 10
; CORRESPONDENCE ADDRESS:
; ADDRESS: Office of Patent Counsel, The Scripps
; ADDRESS: Research Institute
; STREET: 10666 No. 5679639th Torrey Pines Road, TPC 8
; CITY: La Jolla
; STATE: CA
; COUNTRY: USA
; ZIP: 92037
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: Patent Release #1.0, Version #1.25
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/295,411
; FILING DATE: 22-AUG-1994
; CLASSIFICATION: 530
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 07/793,989
; FILING DATE: 18-NOV-1991
; CLASSIFICATION: 530
; ATTORNEY/AGENT INFORMATION:
; NAME: Fitting, Thomas
; REGISTRATION NUMBER: 34,163
; REFERENCE/DOCKET NUMBER: TSRI263.001
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: 619-554-2937
; TELEFAX: 619-554-6312
; INFORMATION FOR SEQ ID NO: 1:
; SEQUENCE CHARACTERISTICS:
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; ANTI-SENSE: NO
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us-09-997-623-4.rpt

Page 10

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Job time : 67 secs

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Query Match 34.2%; Score 794; DB 11; Length 481;
 Best Local Similarity 36.4%; Pred. No. 1.3e-67;
 Matches 162; Conservative 77; Mismatches 158; Indels 48; Gaps 9;

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 QY 121 APEYKLGDDLLQCHPAVKFPCGRPKMEKK-----RSLKRDTEP---QEDQVDP---- 168
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 DT 01-JUN-1998 (TrEMBLrel. 06, Last sequence update)
 DT 01-OCT-2003 (TrEMBLrel. 25, Last annotation update)
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 OG Plasmid pBluescript.
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 OC Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
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 RC TISSUE=Liver;
 RX MEDLINE=98454993; PubMed=9783672;
 RA Heidmann H.H., Kontermann R.E.;
 RT "Cloning and recombinant expression of mouse coagulation factor X.";
 RL Thromb. Res. 92:33-41 (1998).
 CC -1 SIMILARITY: BELONGS TO PEPTIDASE FAMILY S1.
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 DR HSRF: P00742; IYXA.
 DR MEROPS: S01.216; -.
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 DR InterPro: IPR009003; Cys Ser trypsin.
 DR InterPro: IPR00742; EGF_2.
 DR InterPro: IPR001881; EGF CA.
 DR InterPro: IPR001438; EGF_11.
 DR InterPro: IPR006209; EGF-like.
 DR InterPro: IPR002363; Glu blood.
 DR InterPro: IPR001254; Peptidase_S1.
 DR InterPro: IPR003314; Peptidase_S1A.
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 DR PRINTS: PR00001; GLABLOOD.
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 DR SMART: SM00069; Glu; 1.
 DR SMART: SM00020; Tryp; 1.
 DR PROSITE: PS00022; ASX HYDROXYL; 1.
 DR PROSITE: PS00022; EGF_1; 1.
 DR PROSITE: PS01186; EGF_2; 2.
 DR PROSITE: PS01187; EGF CA; 1.
 DR PROSITE: PS00011; GLUT CARBOXYLATION; 1.
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 DR PROSITE: PS00134; TRYPSIN HIS; 1.
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 KM Plasmid.
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Query Match 34.1%; Score 793; DB 11; Length 481;
 Best Local Similarity 36.4%; Pred. No. 1.6e-67;
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RESULT 13
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DT 01-JUN-2003 (TREMblrel. 24, Last sequence update)
DE 01-OCT-2003 (TREMblrel. 25, Last annotation update)
DE Coagulation factor VII precursor (EC 3.4.21.21).
GN F7.
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OC Gallus.
OC NCBI_TaxID=9031;
RN [1]
RP SEQUENCE FROM N.A.
RA Davidson C.J., Hart R.P., Lai K., Snell P., Elgar G.,
RT Tuddenham E.G.D., McVey J.H.;
RT "Comparative sequence analysis and molecular evolution of blood
RT coagulation genes from Gallus gallus and Fugu rubripes.",
RL Submitted (JAN-2002) to the EMBL/GenBank/DBJ databases.
DR EMBL; AF465268; AAO33363.1; -.
DR GO; GO:0005576; C:extracellular; IEA.
DR GO; GO:0003802; F:blood coagulation factor VII activity; IEA.
DR GO; GO:0005509; F:calcium ion binding; IEA.
DR GO; GO:0004263; F:chymotrypsin activity; IEA.
DR GO; GO:0004295; F:hydrolyase activity; IEA.
DR GO; GO:0004295; P:trypsin activity; IEA.
DR GO; GO:0006508; P:proteolysis and peptidolysis; IEA.
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DR InterPro; IPR009003; Cys_ser_trypsin.
DR InterPro; IPR000742; EGF_2.
DR InterPro; IPR001881; EGF_Ca.
DR InterPro; IPR001438; EGF_II.
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DR InterPro; IPR006210; IEGF.
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DR Pfam; PF00089; trypsin; 1.
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DR SMART; SM00181; EGF; 2.
DR SMART; SM00179; EGF_Ca; 1.
DR SMART; SM0069; GLA; 1.
DR SMART; SM00020; TRY_Spec; 1.
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KW Hydrolyase.
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SEQUENCE 425 AA; 47626 MW; 36A69BFD86C DAC CRC64;

Query Match 34.4%; Score 799.5; DB 13; Length 425;
Best Local Similarity 39.4%; Pred. No. 3,2e-68;
Matches 162; Conservative 72; Mismatches 146; Indels 31; Gaps 5;

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Db 153 FCGEGVALSDGVSGLTPOVAYPCGTPVLAKNTT-----AQGRIVGATCP 200
Qy 179 GDSFQGVVLLDSKKKLAAGAVLIHPSWVLTAAQCMD--ESKLLVRLGEYLRKMEKML 236
Db 201 GECFQWALTIQDQKQ-KCGSGLSPFWVTAHAGCLDAHSKQLRVLGLGVYKAEKTRQ 259
Qy 237 DLDIXEVFHPVYSSTTNDIALHLAQFATLSQTLVPCLEDSGLAEELNQAQGETL 296
Db 260 EGVSKTIHBEYTYTGQVNDHLLKLETNPVLDVFWPLCLPEKRFVYVLSSTI-KFSV 318
Qy 297 VTGWGHSRREKARRRTPVNFIFKIPVPHNCSFWNSWSENMLCAGILGDRDAC 356
Db 319 VSGWG-----RLDGGATSTFLMR-VHLPRVYKQDCEKQALNTENMCYAGDLGKKDSC 373
Qy 357 EGDGSGPMVASPHGTWFLVGLVSWSGGCLAHNYGVTTKVSRYLDMIGHI 407
Db 374 KDGSGPHATKYKNTWFLTGIVSGKCAVESGYVTVRSRYINWLAKRM 424

RESULT 14
ID 088947 PRELIMINARY; PRT; 481 AA.
AC 088947;
DT 01-NOV-1998 (TREMblrel. 08, Created)
DT 01-NOV-1998 (TREMblrel. 08, Last sequence update)
DT 01-OCT-2003 (TREMblrel. 25, Last annotation update)
DE Coagulation factor X precursor.
GN F10.
OS Mus musculus (Mouse).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
OC NCBI_TaxID=10090;
RN [1]
RP SEQUENCE FROM N.A.
RA STRAIN=C57BL6 X CBA; TISSUE=Liver;
RC MBDLINE=98347913; PubMed=6684791;
RX Liang Z., Cooper A., Deford M.E., Carmeliet P., Collen D.,
RA Castellino F.J., Rosen E.D.;
RT "Cloning and characterization of a cDNA encoding murine coagulation
RT factor X.",
RL Thromb. Haemost. 80:87-91(1998).
RN [2]
RP SEQUENCE FROM N.A.
RA STRAIN=129Sv;
RC Cooper A., Liang Z., Castellino F.J., Rosen E.D.;
RT "Cloning and Characterization of the Murine Factor X Gene.",
RL Thromb. Haemost. 0:0-0(2000).
CC 1-1 SIMILARITY: BELONGS TO PEPTIDASE FAMILY S1.
DR EMBL; AF087644; AAC6345.1; -.
DR EMBL; AF211347; AAP22980.1; -.
DR HSSP; P00742; IXKA.
DR MEROPS; S01.216; -.
DR MED; MGI:103107; F10.
DR GO; GO:0005576; C:extracellular; IEA.
DR GO; GO:0005509; F:calcium ion binding; IEA.
DR GO; GO:0004263; F:chymotrypsin activity; IEA.
DR GO; GO:0008233; F:peptidase activity; IEA.
DR GO; GO:0004295; F:trypsin activity; IEA.
DR GO; GO:0006508; P:proteolysis and peptidolysis; IEA.
DR InterPro; IPR000152; Asx_hydroxyl_S.
DR InterPro; IPR009003; Cys_ser_trypsin.
DR InterPro; IPR000742; EGF_2.
DR InterPro; IPR001881; EGF_Ca.
DR InterPro; IPR001438; EGF_II.
DR InterPro; IPR006209; EGF_like.
DR InterPro; IPR002383; GLA_blood.
DR InterPro; IPR001254; Peptidase_S1.
DR InterPro; IPR001314; Peptidase_S1A.
DR InterPro; IPR000294; VitK_dep_GLA.
DR Pfam; PF00008; EGF; 2.

```

OS Homo sapiens (Human).
 OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
 OC Mammalia; Eutheria; Primates; Catarrhini; Homnidae; Homo.
 OX NCBI_TaxId=9606;
 RN [1]
 RP SEQUENCE FROM N.A.
 RA Kinoshita S., Iida H., Inoue S., Watanabe K., Kurihara M., Wada Y.,
 RA Ono M., Dongchon K., Hamaaki N.;
 RT "Gene Analysis of Anticoagulation Factors in Japanese Thrombotic
 RT Patients: Genetic Background of Thrombophilia in Japan."
 RL Submitted (AFR-2002) to the EMBL/GenBank/DBJ databases.
 DR EMBL; AB083690; BAC21165.1; -
 DR GO; GO:0004263; Ficolymotrypsin activity; IEA.
 DR GO; GO:0004295; F:trypsin activity; IEA.
 DR GO; GO:0006508; P:proteolysis and peptidolysis; IEA.
 DR InterPro; IPR009003; Cys Ser trypsin.
 DR InterPro; IPR001254; Peptidase_S1.
 DR InterPro; IPR001314; Peptidase_S1A.
 DR Pfam; PF00089; trypsin; 1.
 DR PRINTS; PR00722; CHYMOTRYPSIN.
 DR SMART; SM00020; TRYP_SPE; 1.
 DR PROSITE; PS00240; TRYP SIN DOM; 1.
 DR PROSITE; PS00135; TRYP SIN_SER; 1.
 FT NON_TER 1
 FT NON_TER 1
 SQ SEQUENCE 211 AA; 23315 MW; 901146DTFFSA9AB CRC64;
 Query Match 39.9%; Score 927; DB 4; Length 211;
 Best Local Similarity 95.1%; Pred. No. 6,76-81;
 Matches 173; Conservative 1; Mismatches 6; Indels 2; Gaps 1;
 QY 225 EYDIERMEKELDIDKEVFNHNSKSTTDNDIALHLAQAPTLSQITVPCIPDSGLA 284
 DB 1 EYDIERMEKELDIDKEVFNHNSKSTTDNDIALHLAQAPTLSQITVPCIPDSGLA 60
 QY 285 EREINAGQETLYTGWGTHSSREKXKRRKTFVNFKIPVPHNECEVSNVSNL 344
 DB 61 EREINAGQETLYTGWGTHSSREKXKRRKTFVNFKIPVPHNECEVSNVSNL 120
 QY 345 CAGILDRDACEGSGGPMVAFHGTFMVLVLSWEGCGGLHNYGVYTK--VSRYLDM 402
 DB 121 CAGILDRDACEGSGGPMVAFHGTFMVLVLSWEGCGGLHNYGVYTK--VSRYLDM 180
 QY 403 IH 404
 DB 181 AH 182
 RESULT 12
 ID 063207 PRELIMINARY; PRT; 482 AA.
 AC 063207;
 DT 01-NOV-1996 (TREMblrel. 01, Created)
 DT 01-NOV-1996 (TREMblrel. 01, Last sequence update)
 DT 01-OCT-2003 (TREMblrel. 25, Last annotation update)
 DE Factor X.
 OS Rattus norvegicus (Rat).
 OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
 OC Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Rattus.
 OX NCBI_TaxId=10116;
 RN [1]
 RP SEQUENCE FROM N.A.
 RA STRAIN=Sprague-Dawley;
 RC MEDLINE=96093366; PubMed=8578539;
 RA Stanton C., Ross R.P., Hutson S., Wallin R.;
 RT "Evidence for competition between vitamin K-dependent clotting factors
 RT for intracellular processing by the vitamin K-dependent gamma-
 carboxylase.";
 RL Thromb. Res. 80:63-73 (1995).
 CC -1- SIMILARITY: BELONGS TO PEPTIDASE FAMILY SL.
 DR EMBL; X79807; CAA56202.1; -.
 DR FIR; S49075; EXRT.
 DR HSP; P00742; 1XKA.

DR MEROPS: S01.216; -.
 DR GO; GO:0005576; C:extracellular; IEA.
 DR GO; GO:0005509; F:calcium ion binding; IEA.
 DR GO; GO:0004263; F:chymotrypsin activity; IEA.
 DR GO; GO:0008233; F:peptidase activity; IEA.
 DR GO; GO:0004295; F:trypsin activity; IEA.
 DR GO; GO:0006508; P:proteolysis and peptidolysis; IEA.
 DR InterPro; IPR000152; Asx_Hydroxyl_S.
 DR InterPro; IPR009003; Cys Ser trypsin.
 DR InterPro; IPR000742; EGF 2.
 DR InterPro; IPR001881; EGF Ca.
 DR InterPro; IPR001438; EGF II.
 DR InterPro; IPR006209; EGF like.
 DR InterPro; IPR002383; GLA blood.
 DR InterPro; IPR001254; Peptidase_S1.
 DR InterPro; IPR001314; Peptidase_S1A.
 DR InterPro; IPR000294; VitK_dep_GLA.
 DR Pfam; PF00008; EGF; 2.
 DR Pfam; PF00594; gla; 1.
 DR Pfam; PF00089; trypsin; 1.
 DR PRINTS; PR00722; CHYMOTRYPSIN.
 DR PRINTS; PR00010; EGFBLDOD.
 DR PRINTS; PR00001; GLABLOOD.
 DR SMART; SM00179; EGF CA; 1.
 DR SMART; SM00069; GLA; 1.
 DR SMART; SM00020; TRYP_SPE; 1.
 DR PROSITE; PS00010; ASX_HYDROXYL; 1.
 DR PROSITE; PS00022; EGF 1; 1.
 DR PROSITE; PS00186; EGF 2; 2.
 DR PROSITE; PS01187; EGF CA; 1.
 DR PROSITE; PS00011; GLU CARBOXYLATION; 1.
 DR PROSITE; PS0240; TRYP SIN DOM; 1.
 DR PROSITE; PS00134; TRYP SIN HIS; 1.
 DR PROSITE; PS00135; TRYP SIN_SER; 1.
 KM EGF-like domain; Hydrolase; Protease; Serine protease.
 SQ SEQUENCE 482 AA; 54265 MW; 0284679B3954A698 CRC64;
 Query Match 35.2%; Score 818.5; DB 11; Length 482;
 Best Local Similarity 37.0%; Pred. No. 5,66-70;
 Matches 165; Conservative 79; Mismatches 153; Indels 49; Gaps 8;
 QY 1 ANSPFELRHSLSRECEETERTCDPEFAKEIFQVDDTLAFMSKHVDDQCLVPLEHPCA 60
 DB 41 ANSPFELRHSLSRECEETERTCDPEFAKEIFQVDDTLAFMSKHVDDQCLVPLEHPCA 94
 QY 61 SLCCGHTCTIDGIGSPDCRSWGEGFCCQREVSPLNGLDNGCTHYCLAEVGRRCSC 120
 DB 95 --CQNGECRDLGSGYTCCTCTEPEGRNCELFYRKL--CSLDNBD--COF CREQNSVCSG 151
 QY 121 APGYLGGDILLQCHPAVKEPPGAPRKMEKK-----RSHLKEITDEQEDQV----- 167
 DB 152 AKGYFLGNDKSLSTAPFGCKTKNGRAKRSVALNTNSPEDEIMPDADILYPTESP 211
 QY 168 -----PRLDGMTRGDSPPQVVL--DSKKLACGAVLIHPSWLT 208
 DB 212 SELNLNKTPEKANSVDYRTVYGQECRGECPKQALLFSBEHDFCGGTIANFYLT 271
 QY 209 AAKCMDESKLVLVIGEDYDRLRMEKELDIDKEVFNHNSKSTTDNDIALHLAQAPT 268
 DB 272 AAHCLHQAKRFKRVVDLNTBQDGEVHEVDMLIKANKFQRTDYFDIAMLRLKPT 331
 QY 269 LSGTIVPTCLPDSGLAEFLNAGQET-LVTGWGTHSSREKXKRRKTFVNFKIPV 327
 DB 332 FRENVAAPICLPQDMWAEATL--MTQKGIYSGFGRTHKGRQSK--VAKKEVPPVD 384
 QY 328 HNECEVSNVSNVSNLCAGILDRDACEGSGGPMVAFHGTFMVLVLSWEGCGGL 387
 DB 385 RNTCLSTSPSTIGNMFCAGYDAKQEDACGDSGCGPHYTRKDTYFTVGIWSGCARX 444
 QY 388 HNYGVYTVKSRYLDTWHGIRDKAP 413
 DB 445 GKGYITKVTATFLKWTDRSMARVGP 470


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RESULT 9
081XB4 PRELIMINARY; PRT; 195 AA.
ID 081XB4
AC 081XB4;
DT 01-MAR-2003 (TREMBlrel. 23, Created)
DT 01-MAR-2003 (TREMBlrel. 23, Last sequence update)
DT 01-OCT-2003 (TREMBlrel. 25, Last annotation update)
DE Protein C (Fragment).
GN PROCL.
OS Homo sapiens (Human).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Primates; Catarrhini; Homnidae; Homo.
CX NCBI_TaxID=9606;
RM [1]
RP SEQUENCE FROM N.A.
RA Kinoshta S., Iida H., Inoue S., Matanabe K., Kurihara M., Wada Y.,
RA Ono M., Dongchot K., Hamasaki N.;
RT "Gene Analysis of Anticoagulation Factors in Japanese Thrombotic
RT Patients. Genetic Background of Thrombophilia in Japan."
RL Submitted (JUN-2002) to the EMBL/GenBank/DBJ databases.
DR EMBL; AB086852; BAC54280.1;
DR GO; GO:0004263; F:chymotrypsin activity; IEA.
DR GO; GO:0004295; F:trypsin activity; IEA.
DR GO; GO:0006508; P:proteolysis and peptidolysis; IEA.
DR InterPro; IPR009003; Cys Ser trypsin.
DR InterPro; IPR01254; Ser trypsin.
DR InterPro; IPR01314; Peptidase-S1A.
DR Pfam; PF00089; trypsin; 1.
DR PRINTS; PR00722; CHYMOTRYPSIN.
DR SMART; SM00020; TRY_SPC; 1.
DR PROSITE; PS02340; TRYPSIN_DOM; 1.
DR PROSITE; PS00135; TRYPSIN_SER; 1.
FT NON_TER 1
SQ
SD QDENCE 195 AA; 22016 MW; 9873861042998D7 CRC64;

Query Match 45.6%; Score 1059; DB 4; Length 195;
Best Local Similarity 99.5%; Pred. No. 1.2e-93;
Matches 194; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 225 EVDARRKKEKELDLIDKEVFVHPYSSKSTNDIALLLAOPATLSOTIVPICLPDGLA 284
DB 1 EVDARRKKEKELDLIDKEVFVHPYSSKSTNDIALLLAOPATLSOTIVPICLPDGLA 60
QY 285 EELINQAGQETLVYTGCHSSREKAKRNTFVLFPIKIPVPHNECSEVMNSVSNL 344
DB 61 EELINQAGQETLVYTGCHSSREKAKRNTFVLFPIKIPVPHNECSEVMNSVSNL 120
QY 345 CAGILGDRDACEGDSGGPMVAFPHGTWFLVGLVSGKGCGLHNTGTTKYSRYLDMIH 404
DB 121 CAGILGDRDACEGDSGGPMVAFPHGTWFLVGLVSGKGCGLHNTGTTKYSRYLDMIH 180
QY 405 GHIRKKAPOKSNAP 419
DB 181 GHIRKKAPOKSNAP 195

RESULT 10
07T3B6 PRELIMINARY; PRT; 434 AA.
ID 07T3B6
AC 07T3B6;
DT 01-OCT-2003 (TREMBlrel. 25, Created)
DT 01-OCT-2003 (TREMBlrel. 25, Last sequence update)
DT 01-OCT-2003 (TREMBlrel. 25, Last annotation update)
DE Hypothetical protein.
OS Brachydanio rerio (zebrafish) (Danio rerio).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Actinopterygii; Neopterygii; Teleostei; Ostariophysi; Cypriniformes;
OC Cyprinidae; Danio.
CX NCBI_TaxID=7955;
RM [1]
RP SEQUENCE FROM N.A.

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RC TISSUE=Kidney;
RX MEDLINE=2386257; PubMed=12477932;
RA Strausberg R.L., Feingold E.A., Grouse L.H., Derge J.G.,
RA Klausner R.D., Collins F.S., Wagner L., Shenmen C.M., Schuler G.D.,
RA Altschul S.F., Zeeberg B., Buetow K.H., Schaefer C.F., Bhat N.K.,
RA Hopkins R.F., Jordan H., Moore T., Max S.I., Wang J., Hsieh F.,
RA Datchenko L., Marusina K., Farmer A.A., Rubin G.M., Hong L.,
RA Stapleton M., Soares M.B., Bonaldo M.F., Casavant T.L., Schetz T.E.,
RA Brownstein M.J., Ueda T.B., Toshiyuki S., Carninci P., Prange C.,
RA Raha S.S., Loquellano N.A., Peters G.J., Abramson R.D., Mullaly S.J.,
RA Boak S.A., McEwan P.J., McKernan K.J., Malek J.A., Gunaratne P.H.,
RA Richards S., Wortley K.C., Hale S., Garcia A.M., Gay L.J., Hulyk S.W.,
RA Villalón D.K., Muzny D.K., Sodergren E.J., Lu X., Gibbs R.A.,
RA Fahey J., Helton E., Kettman M., Madan A., Rodriguez S., Sanchez A.,
RA Blakeley R.W., Touchman J.W., Green E.D., Dickson M.C.,
RA Rodriguez A.C., Grimwood J., Schmutz J., Myers R.M., Butterfield Y.S.,
RA Kravchenko M.I., Skalka U., Smallos D.E., Scherch A., Schein J.E.,
RA Jones S.J., Maitra W.A.;
RT "Generation and initial analysis of more than 15,000 full-length human
RT and mouse cDNA sequences."
RL Proc. Natl. Acad. Sci. U.S.A. 99:16899-16903 (2002).
RM [2]
RP SEQUENCE FROM N.A.
RC TISSUE=Kidney;
RA Strausberg R.;
RL Submitted (JUN-2003) to the EMBL/GenBank/DBJ databases.
DR EMBL; BC053182; AAH53182.1; -.
CX Hypothetical protein.
SQ
SD QDENCE 434 AA; 48516 MW; B47BD7947CF9D9C9 CRC64;

Query Match 42.0%; Score 975.5; DB 13; Length 434;
Best Local Similarity 45.1%; Pred. No. 3.7e-85;
Matches 189; Conservative 70; Mismatches 131; Indels 29; Gaps 6;

QY 1 ANSPLEELRHSSRECEIREICPEPEAKEIFQVNDTLAFMSKHYVDQCLVPLEHPCA 60
DB 40 ANSPLEELKASLEREGRELCDFEAREIFITRENTLEFVAYKADNQCTMP----- 93
QY 61 SLCCGHTGICDIGSPSCDRCSGWEGRPQREVSFLNCSLDNGGCTHYCLEEVGM--RRC 118
DB 94 ---CVHAKCVLIDQDPSCTCDSGFEKCHDLRTATNCISLNNKGDCHDSKDIARTC 150
QY 119 SCAPRYKGDLLQCHPAKFPQGRPKRMKMKRSLKEDTDEDQVDVRLIDGQMTTR 178
DB 151 SCIKGYQLQDMSRCKTPKNDASQD--IRLPKSAVANK-----KPVVLQPMVGNVGR 203
QY 179 GDSFNVVLDSKKKACAGAVLIHPSWVLTAAQCMDSKKLVKAGEYDLRMKWEKLDL 238
DB 204 GESPMQALILHLGRPHCGSVLIDENWVLTAAQCLTSKSFVRLGQYQFKFESQVTL 263
QY 239 DKEVFVHPYSSKSTNDIALLLAOPATLSOTIVPICLPDGLARHINQAGQETLVY 298
DB 264 PVKOHISHPOYNPIYVDNDIALRLDGPVKESTYIIPACLPSELARMLRRNGVLTIT 323
QY 299 GKGYSREKAKRNTFVLFPIKIPVPHNECSEVMNSVSNL CAGILGDRDACEG 358
DB 324 GKG---KKNQSAISYSTLHYELPIVDNKECSRMMNNLSIDNLTCAVLGQVKNACSG 379
QY 359 DSGGPMVAFPHGTWFLVGLVSGKGCGLHNTGTTKYSRYLDMIHGHIDKKAPOKSN 417
DB 380 DSGGPMVAFPHGTWFLVGLVSGKGCGLHNTGTTKYSRYLDMIH-----DSVVGQW 431

RESULT 11
08J009 PRELIMINARY; PRT; 211 AA.
ID 08J009
AC 08J009;
DT 01-MAR-2003 (TREMBlrel. 23, Created)
DT 01-MAR-2003 (TREMBlrel. 23, Last sequence update)
DT 01-OCT-2003 (TREMBlrel. 25, Last annotation update)
DE Protein C (Fragment).
GN PROC.

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DR EMBL: AB083693; BAC21166.1; -.
DR GO: GO:0004263; F:chymotrypsin activity; IEA.
DR GO: GO:0004295; F:trypsin activity; IEA.
DR GO: GO:0006508; P:proteolysis and peptidolysis; IEA.
DR InterPro: IPR009003; Cys_Ser_trypsin.
DR InterPro: IPR001254; Peptidase_S1.
DR InterPro: IPR001314; Peptidase_S1A.
DR Pfam: PF00089; trypsin; 1.
DR PRINTS: PR00722; CHYMOTRYPSIN.
DR SMART: SM00020; TRYP_SPC; 1.
DR PROSITE: PS0240; TRYP_SIN_DOM; 1.
DR PROSITE: PS00135; TRYP_SIN_SER; 1.
FT NON TER 1
SQ SEQUENCE 195 AA; 21986 MW; F1BC49C227CEB8C6 CRC64;

Query Match 45.7%; Score 1063; DB 4; Length 195;
Best Local Similarity 99.5%; Pred. No. 4.8e-94;
Matches 194; Conservative 1; Mismatches 0; Indels 0; Gaps 0;

QY 225 EYDLRRMEKELDIDKEVFPVHPNYSKSTTDNDIALHLAQPATLSQTIIVPCLPDSGLA 284
DB 1 EYDLRRMEKELDIDKEVFPVHPNYSKSTTDNDIALHLAQPATLSQTIIVPCLPDSGLA 60
QY 285 ERELNAGQETLVGWGYSRSREKAKRNRTFVNFIKIPVPHNECSGVMSNVSNNL 344
DB 61 ERELNAGQETLVGWGYSRSREKAKRNRTFVNFIKIPVPHNECSGVMSNVSNNL 120
QY 345 CAGLIGDRDACEGSGGPMVASFHGTWFLVGLVSWGEGGLHNYGYTVKSRYLDMIH 404
DB 121 CAGLIGDRDACEGSGGPMVASFHGTWFLVGLVSWGEGGLHNYGYTVKSRYLDMIH 180
QY 405 GHIRDEKAPQKSNAP 419
DB 181 GHIRDEKAPQKSNAP 195

RESULT 7
Q8J007 PRELIMINARY; RT; 195 AA.
ID Q8J007
AC Q8J007
DT 01-MAR-2003 (TREMblrel. 23, Created)
DT 01-MAR-2003 (TREMblrel. 23, Last sequence update)
DT 01-OCT-2003 (TREMblrel. 25, Last annotation update)
DE Protein C (Fragment).
GN PROC.
OS Homo sapiens (Human).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Primates; Catarrhini; Homiidae; Homo.
OX NCBI_TaxID=9606;
RN [1]
RP SEQUENCE FROM N.A.
RA Kinoshita S., Iida H., Inoue S., Matanabe K., Kurihara M., Wada Y.,
"Gene Analysis of Anticoagulation Factors in Japanese Thrombotic
Patients. Genetic Background of Thrombophilia in Japan."
Submitted (APR-2002) to the EMBL/GenBank/DBJ databases.
RL EMBL: AB083695; BAC21167.1; -.
DR GO: GO:0004263; F:chymotrypsin activity; IEA.
DR GO: GO:0004295; F:trypsin activity; IEA.
DR GO: GO:0006508; P:proteolysis and peptidolysis; IEA.
DR InterPro: IPR009003; Cys_Ser_trypsin.
DR InterPro: IPR001254; Peptidase_S1.
DR InterPro: IPR001314; Peptidase_S1A.
DR Pfam: PF00089; trypsin; 1.
DR PRINTS: PR00722; CHYMOTRYPSIN.
DR SMART: SM00020; TRYP_SPC; 1.
DR PROSITE: PS0240; TRYP_SIN_DOM; 1.
DR PROSITE: PS00135; TRYP_SIN_SER; 1.
FT NON TER 1
SQ SEQUENCE 195 AA; 22018 MW; E5E817911DC998C6 CRC64;

Query Match 45.7%; Score 1062; DB 4; Length 195;
Best Local Similarity 99.5%; Pred. No. 6e-94;
Matches 194; Conservative 1; Mismatches 0; Indels 0; Gaps 0;

Matches 194; Conservative 1; Mismatches 0; Indels 0; Gaps 0;

QY 225 EYDLRRMEKELDIDKEVFPVHPNYSKSTTDNDIALHLAQPATLSQTIIVPCLPDSGLA 284
DB 1 EYDLRRMEKELDIDKEVFPVHPNYSKSTTDNDIALHLAQPATLSQTIIVPCLPDSGLA 60
QY 285 ERELNAGQETLVGWGYSRSREKAKRNRTFVNFIKIPVPHNECSGVMSNVSNNL 344
DB 61 ERELNAGQETLVGWGYSRSREKAKRNRTFVNFIKIPVPHNECSGVMSNVSNNL 120
QY 345 CAGLIGDRDACEGSGGPMVASFHGTWFLVGLVSWGEGGLHNYGYTVKSRYLDMIH 404
DB 121 CAGLIGDRDACEGSGGPMVASFHGTWFLVGLVSWGEGGLHNYGYTVKSRYLDMIH 180
QY 405 GHIRDEKAPQKSNAP 419
DB 181 GHIRDEKAPQKSNAP 195

RESULT 8
Q8J006 PRELIMINARY; RT; 195 AA.
ID Q8J006
AC Q8J006
DT 01-MAR-2003 (TREMblrel. 23, Created)
DT 01-MAR-2003 (TREMblrel. 23, Last sequence update)
DT 01-OCT-2003 (TREMblrel. 25, Last annotation update)
DE Protein C (Fragment).
GN PROC.
OS Homo sapiens (Human).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Primates; Catarrhini; Homiidae; Homo.
OX NCBI_TaxID=9606;
RN [1]
RP SEQUENCE FROM N.A.
RA Kinoshita S., Iida H., Inoue S., Matanabe K., Kurihara M., Wada Y.,
"Gene Analysis of Anticoagulation Factors in Japanese Thrombotic
Patients. Genetic Background of Thrombophilia in Japan."
Submitted (APR-2002) to the EMBL/GenBank/DBJ databases.
RL EMBL: AB083696; BAC21168.1; -.
DR GO: GO:0004263; F:chymotrypsin activity; IEA.
DR GO: GO:0004295; F:trypsin activity; IEA.
DR GO: GO:0006508; P:proteolysis and peptidolysis; IEA.
DR InterPro: IPR009003; Cys_Ser_trypsin.
DR InterPro: IPR001254; Peptidase_S1.
DR InterPro: IPR001314; Peptidase_S1A.
DR Pfam: PF00089; trypsin; 1.
DR PRINTS: PR00722; CHYMOTRYPSIN.
DR SMART: SM00020; TRYP_SPC; 1.
DR PROSITE: PS0240; TRYP_SIN_DOM; 1.
DR PROSITE: PS00135; TRYP_SIN_SER; 1.
FT NON TER 1
SQ SEQUENCE 195 AA; 22016 MW; F1B818C1138CC6 CRC64;

Query Match 45.6%; Score 1059; DB 4; Length 195;
Best Local Similarity 99.5%; Pred. No. 1.2e-93;
Matches 194; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 225 EYDLRRMEKELDIDKEVFPVHPNYSKSTTDNDIALHLAQPATLSQTIIVPCLPDSGLA 284
DB 1 EYDLRRMEKELDIDKEVFPVHPNYSKSTTDNDIALHLAQPATLSQTIIVPCLPDSGLA 60
QY 285 ERELNAGQETLVGWGYSRSREKAKRNRTFVNFIKIPVPHNECSGVMSNVSNNL 344
DB 61 ERELNAGQETLVGWGYSRSREKAKRNRTFVNFIKIPVPHNECSGVMSNVSNNL 120
QY 345 CAGLIGDRDACEGSGGPMVASFHGTWFLVGLVSWGEGGLHNYGYTVKSRYLDMIH 404
DB 121 CAGLIGDRDACEGSGGPMVASFHGTWFLVGLVSWGEGGLHNYGYTVKSRYLDMIH 180
QY 405 GHIRDEKAPQKSNAP 419
DB 181 GHIRDEKAPQKSNAP 195

Db	Accession	Species	Protein Name	Length
Qy	179	GDS	PROVNTLSSKKKLAAGNLIHSWTLAAHOMESKLLVLGSDYDRMEKEDL	238
Db	221	GDS	PMOALTLSSKKKLAAGGVLIHSWTLAAHOMESKLLVLGSDYDRMEKEDL	280
Qy	229	DIEVEVHNYSKSTINDTALLIHAQPATLSQTIPICLPDSGLARELNOAGETLVT	298	
Db	261	DIEIIVHNYSKSTINDTALLIHAQPATLSQTIPICLPDSGLARELNOAGETLVT	333	
Qy	299	GMGYSHSREKAKNRTFVINFIKIPVPFNHES EWSNNNS ENMLCGLIGSPDACEG	350	
Db	340	GMGYSDRKDGRRRTFIFTRIPVLARNECEVWKVNS ENMLCGLIGSPDACEG	399	
Qy	359	DSGPMVAFPHGHTWIVGVSMGEGGLAHNGVTKVSRVYDWIHHGIDKZAPDGS	416	
Db	400	DSGPMVAFPHGHTWIVGVSMGEGGLAHNGVTKVSRVYDWIHHGIDKZAPDGS	457	
RESULT 4				
0804X5	PRELIMINARY:	ERT:	433 AA.	
ID	0804X5			
AC	0804X5			
DT	01-JUN-2003 (TREMBlrel. 24, Created)			
DT	01-JUN-2003 (TREMBlrel. 24, Last sequence update)			
DT	01-OCT-2003 (TREMBlrel. 25, Last annotation update)			
DE	Anticoagulant protein C precursor (EC 3.4.21.69).			
GN	PROC.			
OS	Gallus gallus (chicken).			
OC	Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;			
OC	Archosauria; Aves; Neognathae; Galliformes; Phasianidae; Phasianae;			
OC	Gallus.			
OX	NCBI_TaxID=9031;			
RN	[1]			
RP	SEQUENCE FROM N.A.			
RA	Davidson C.J., Hilt R.P., Lal K., Snell P., Eigar G.,			
RA	"Judgement E.G.D., McVey U.H.;"			
RT	"Comparative sequence analysis and molecular evolution of blood			
RT	coagulation genes from Gallus gallus and Fugu rubripes.";			
RL	Submitted (JAN-2002) to the EMBL/GenBank/DDBJ databases.			
DR	EMBL: AF465270; AAC3365.1; -;			
DR	GO: GO:0005576; C:extracellular; IEA.			
DR	GO: GO:0005509; F:calcium ion binding; IEA.			
DR	GO: GO:0004263; F:chymotrypsin activity; IEA.			
DR	GO: GO:0016787; F:hydrolase activity; IEA.			
DR	GO: GO:0003808; F:protein C (activated) activity; IEA.			
DR	GO: GO:0004295; F:trypsin activity; IEA.			
DR	GO: GO:0006508; P:proteolysis and peptidolysis; IEA.			
DR	InterPro: IPR000152; Asx_hydroxy1_5.			
DR	InterPro: IPR009003; Cys_Set_Trypsin.			
DR	InterPro: IPR000742; EGF 2.			
DR	InterPro: IPR001881; EGF Ca.			
DR	InterPro: IPR006209; EGF like.			
DR	InterPro: IPR002383; GLA blood.			
DR	InterPro: IPR002610; IEGF.			
DR	InterPro: IPR001254; peptidase S1.			
DR	InterPro: IPR001314; peptidase S1A.			
DR	InterPro: IPR000294; Vitk_dep_GLA.			
DR	Pfam: PF00008; EGF 1.			
DR	Pfam: PF00594; Glaf 1.			
DR	Pfam: PF00089; trypsin; 1.			
DR	PRINTS; PR00722; CHMOTRYPsin.			
DR	PRINTS; PR00001; GLABLOOD.			
DR	SMART; SM00181; EGF 2.			
DR	SMART; SM00179; EGF Ca. 1.			
DR	SMART; SM00069; Glaf 1.			
DR	SMART; SM00020; Tryp sec; 1.			
DR	PROSITE; PS00010; ASX_HYDROXYL. 1.			
DR	PROSITE; PS00022; EGF 1; 1.			
DR	PROSITE; PS01186; EGF 2; 2.			
DR	PROSITE; PS01187; EGF Ca. 1.			
DR	PROSITE; PS00011; GLU CARBOXYLATION; 1.			
DR	PROSITE; PS00240; TRYPSIN_DOM; 1.			

DR InterPro: IPR002383; GLA blood.
 DR InterPro: IPR006210; IEGF.
 DR InterPro: IPR001254; Peptidase_S1.
 DR InterPro: IPR001314; Peptidase_S1A.
 DR InterPro: IPR000294; Vitk_dep_GLA.
 DR Pfam: PF00008; EGF_2.
 DR Pfam: PF00594; GLA; 1.
 DR Pfam: PF00089; trypsin; 1.
 DR PRINTS: PR00722; CHYMOTRYPSIN.
 DR PRINTS: PR00001; GLABLOOD.
 DR SMART: SM00181; EGF_2.
 DR SMART: SM00069; GLA; 1.
 DR SMART: SM00020; TRY_SPC; 1.
 DR PROSITE: PS00010; ASX_HYDROXYL; 1.
 DR PROSITE: PS00022; EGF_1; 1.
 DR PROSITE: PS01186; EGF_2; 2.
 DR PROSITE: PS01187; EGF_CA; 1.
 DR PROSITE: PS00011; GLUTAMINYLATION; 1.
 DR PROSITE: PS0240; TRYPSIN_DOM; 1.
 DR PROSITE: PS00134; TRYPSIN_HIS; 1.
 DR PROSITE: PS00135; TRYPSIN_SER; 1.
 DR EGF-like domain; Hydrolyase; Protease; Serine protease; Signal.
 KW SIGNAL.
 FT SIGNAL 1 42 POTENTIAL.
 FT CHAIN 43 192 PROTEIN C LIGHT CHAIN.
 FT CHAIN 193 194 PROTEIN C CONNECTING DIPEPTIDE.
 PT CHAIN 195 456 PROTEIN C HEAVY CHAIN.
 SQ SEQUENCE 456 AA; 50813 MW; 7AD3A6C1C34E59FF CRC64;

Query Match 81.5%; Score 1894.5; DB 6; Length 456;
 Best Local Similarity 80.9%; Pred. No. 1.2e-173;
 Matches 339; Conservative 31; Mismatches 44; Indels 5; Gaps 2;

QY 1 ANSPLELRHSLEKECEIEICDFEAKEIFQNDVDTLAFMSHYVGDQCVLPLEHPCA 60
 DB 43 ANSPLELRHSLEKECEIEICDFEAKEIFQNDVDTLAFMSHYVGDQCVLPLEHPCA 102
 QY 61 SLCCGHTCIDIGSGFSDCRSGMEGRFCQREVSFLNCSLNGGCTHYCLEEVGMRRCSC 120
 DB 103 SPCGHSCTIDIGAFHDCGRGMEGRFCQREVSFLNCSLNGGCTHYCLEEVGMRRCSC 162
 QY 121 APGYKGDLLQCHPAVPCGRPMERMEKRSKHKRDTEDQEDQV--DRLIDGKMTRR 180
 DB 163 APGYKGDLLQCHPAVPCGRPMERMEKRSKHKRDTEDQEDQV--DRLIDGKMTRR 221
 QY 181 SPWQVVLDSKKKLAGAVLIHPSVTLAAHOMESKLLVLRGEVDLRMEKRELDL 240
 DB 222 SPWQVVLDSKKKLAGAVLIHPSVTLAAHOMESKLLVLRGEVDLRMEKRELDL 281
 QY 241 KEVFEHNTSKSTNDIALHLAOPATLSQTIYPICLPDSGLARELNOAGCELTAVTGM 300
 DB 282 KEVFEHNTSKSTNDIALHLAOPATLSQTIYPICLPDSGLARELNOAGCELTAVTGM 341
 QY 301 GYHSREKEAKRRTFVNLFIKIPVPHNECEVMSNMVSENNLCAGILGSDRACGDS 360
 DB 342 GYHSREKEAKRRTFVNLFIKIPVPHNECEVMSNMVSENNLCAGILGSDRACGDS 397
 QY 361 GGPVVASFHGTMFLVGLVSGEGGLIANYGYTYTYSRYDMLHGHIRKXAPKXMAP 419
 DB 398 GGPVVASFHGTMFLVGLVSGEGGLIANYGYTYTYSRYDMLHGHIRKXAPKXMAP 456

RESULT 2
 Q91WN8 PRELIMINARY; PRT; 460 AA.
 AC Q91WN8;
 DT 01-DEC-2001 (TrEMBLrel. 19, Created)
 DT 01-DEC-2001 (TrEMBLrel. 19, Last sequence update)
 DT 01-OCT-2003 (TrEMBLrel. 25, Last annotation update)
 DE Similar to protein C.
 GN PROC.
 OS Mus musculus (Mouse).
 OC Eukaryota; Chordata; Craniata; Vertebrata; Euteleostomi;
 OC Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Mus.

OX NCBI_TaxID=10090;
 RN [1]
 RP SEQUENCE FROM N.A.
 RC TISSUE=Liver;
 RA Struhsberg R.;
 RL Submitted (SEP-2001) to the EMBL/GenBank/DBJ databases.
 CC -1- SIMILARITY: BELONGS TO PEPTIDASE FAMILY S1.
 DR EMBL: BC01896; AAH1896.1; -.
 DR HSP; P00761; IANI.
 DR WGD; M61; 97771; Proc.

DR GO: GO:0005576; C:extracellular; IEA.
 DR GO: GO:0005509; F:calcium ion binding; IEA.
 DR GO: GO:0004263; F:chymotrypsin activity; IEA.
 DR GO: GO:0008233; F:peptidase activity; IEA.
 DR GO: GO:0004295; F:trypsin activity; IEA.
 DR GO: GO:0006508; F:proteolysis and peptidolysis; IEA.
 DR InterPro: IPR001512; Asx_hydroxyl_5.
 DR InterPro: IPR009003; Cys_ser_trypsin.
 DR InterPro: IPR001881; EGF_CA.
 DR InterPro: IPR006209; EGF_like.
 DR InterPro: IPR002383; GLA blood.
 DR InterPro: IPR001254; Peptidase_S1.
 DR InterPro: IPR001314; Peptidase_S1A.
 DR InterPro: IPR000294; Vitk_dep_GLA.
 DR Pfam: PF00008; EGF_2.
 DR Pfam: PF00594; GLA; 1.
 DR PRINTS: PR00722; CHYMOTRYPSIN.
 DR PRINTS: PR00001; GLABLOOD.
 DR SMART: SM00179; EGF_CA; 1.
 DR SMART: SM00069; GLA; 1.
 DR SMART: SM00020; TRY_SPC; 1.
 DR PROSITE: PS00010; ASX_HYDROXYL; 1.
 DR PROSITE: PS00022; EGF_1; 1.
 DR PROSITE: PS01186; EGF_2; 2.
 DR PROSITE: PS01187; EGF_CA; 1.
 DR PROSITE: PS00011; GLUTAMINYLATION; 1.
 DR PROSITE: PS0240; TRYPSIN_DOM; 1.
 DR PROSITE: PS00134; TRYPSIN_HIS; 1.
 DR PROSITE: PS00135; TRYPSIN_SER; 1.
 KW EGF-like domain; Hydrolyase; Protease; Serine protease.
 SQ SEQUENCE 460 AA; 51818 MW; 011F726E68FC274 CRC64;

Query Match 70.4%; Score 1635; DB 11; Length 460;
 Best Local Similarity 69.9%; Pred. No. 1.2e-148;
 Matches 222; Conservative 55; Mismatches 67; Indels 4; Gaps 3;

QY 1 ANSPLELRHSLEKECEIEICDFEAKEIFQNDVDTLAFMSHYVGDQCVLPLEHPCA 60
 DB 42 ANSPLELRHSLEKECEIEICDFEAKEIFQNDVDTLAFMSHYVGDQCVLPLEHPCA 101
 QY 61 SLCCGHTCIDIGSGFSDCRSGMEGRFCQREVSFLNCSLNGGCTHYCLEEVGMRRCSC 120
 DB 102 SPCGHSCTIDIGSGFSDCRSGMEGRFCQREVSFLNCSLNGGCTHYCLEEVGMRRCSC 161
 QY 121 APGYKGDLLQCHPAVPCGRPMERMEKRSKHKRDTEDQEDQV--DRLIDGKMTRR 178
 DB 162 APGYKGDLLQCHPAVPCGRPMERMEKRSKHKRDTEDQEDQV--DRLIDGKMTRR 220
 QY 179 GSPQVVLDSKKKLAGAVLIHPSVTLAAHOMESKLLVLRGEVDLRMEKRELDL 238
 DB 221 GSPQVVLDSKKKLAGAVLIHPSVTLAAHOMESKLLVLRGEVDLRMEKRELDL 280
 QY 239 DIKEVFEHNTSKSTNDIALHLAOPATLSQTIYPICLPDSGLARELNOAGCELTAVT 298
 DB 281 DIKEVFEHNTSKSTNDIALHLAOPATLSQTIYPICLPDSGLARELNOAGCELTAVT 339
 QY 299 GYHSREKEAKRRTFVNLFIKIPVPHNECEVMSNMVSENNLCAGILGSDRACGDS 358
 DB 340 GYHSREKEAKRRTFVNLFIKIPVPHNECEVMSNMVSENNLCAGILGSDRACGDS 399
 QY 359 DSGPVMVASFHGTMFLVGLVSGEGGLIANYGYTYTYSRYDMLHGHIRKXAPKXMAP 416

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OM protein - protein search, using sw model

Run on: June 2, 2004, 16:51:36 ; Search time 56 Seconds
(without alignments)
2360.752 Million cell updates/sec

Title: US-09-997-623-4
Perfect score: 2324
Sequence: 1 ANSLFELHSLSSLEKCEIE.....LDWIGHIRDKAPQKSNAP 419

Scoring table: BLOSUM62
Gapop 10.0 , Gapext 0.5

Searched: 1017041 seqs, 315518202 residues

Total number of hits satisfying chosen parameters: 1017041

Minimum DB seq length: 0
Maximum DB seq length: 200000000

Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries

Database : SPTREMBL_25:*
1: sp archaea:*
2: sp bacteria:*
3: sp fungi:*
4: sp human:*
5: sp invertebrate:*
6: sp mammal:*
7: sp mnc:*
8: sp organelle:*
9: sp phage:*
10: sp plant:*
11: sp rodent:*
12: sp virus:*
13: sp vertebrate:*
14: sp unclassified:*
15: sp virus:*
16: sp bacteriophage:*
17: sp archaea:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Query Match	Length	ID	Description
1	1894.5	81.5	456	6 Q9TRR0	Q9TRR0 canis fam1
2	1635	70.4	460	11 Q91WN8	Q91WN8 mus musculu
3	1629	70.1	460	11 Q99PC6	Q99PC6 mus musculu
4	1143.5	49.2	433	13 Q804X5	Q804X5 gallus galli
5	1134.5	48.8	455	13 Q7SY86	Q7SY86 xenopus lae
6	1063	45.7	195	4 Q8J008	Q8J008 homo sapien
7	1062	45.7	195	4 Q8J007	Q8J007 homo sapien
8	1059	45.6	195	4 Q8J006	Q8J006 homo sapien
9	1059	45.6	195	4 Q8IXB4	Q8IXB4 homo sapien
10	975.5	42.0	434	13 Q7T3B6	Q7T3B6 brachydanto
11	927	39.9	211	4 Q8J009	Q8J009 homo sapien
12	818.5	35.2	482	11 Q804X7	Q804X7 gallus galli
13	799.5	34.4	425	13 Q804X7	Q804X7 gallus galli
14	794	34.2	481	11 Q88947	Q88947 mus musculu
15	793	34.1	481	11 Q84740	Q84740 mus musculu
16	793	34.1	481	11 Q99132	Q99132 mus musculu

17	788	33.9	446	11 Q8K3U6	Q8K3U6 rattus norv
18	787	33.9	433	13 Q90YX1	Q90YX1 brachydanto
19	784	33.7	433	13 Q8JHD0	Q8JHD0 brachydanto
20	781	33.6	479	4 Q96PQ8	Q96PQ8 homo sapien
21	775	33.3	475	13 Q804W9	Q804W9 fugu rubrip
22	773	33.3	469	6 Q9GMD9	Q9GMD9 ornithorhyn
23	772	33.2	446	11 Q61109	Q61109 mus musculu
24	749.5	32.3	441	13 Q804X2	Q804X2 fugu rubrip
25	743	32.0	442	13 Q804X1	Q804X1 fugu rubrip
26	740	31.8	461	6 Q9SND7	Q9SND7 pan troglod
27	739.5	31.8	471	13 Q804X6	Q804X6 gallus galli
28	734.5	31.6	430	13 Q804X0	Q804X0 fugu rubrip
29	718	30.9	461	6 Q9SND6	Q9SND6 pan troglod
30	711.5	30.6	443	13 Q8JHC9	Q8JHC9 brachydanto
31	703	30.2	503	13 Q8AYE4	Q8AYE4 brachydanto
32	688.5	29.6	537	13 Q804W8	Q804W8 fugu rubrip
33	671.5	28.9	474	13 Q8JHC8	Q8JHC8 brachydanto
34	565.5	24.3	524	13 Q7SXH8	Q7SXH8 brachydanto
35	565.5	24.3	622	4 Q7Z7P3	Q7Z7P3 homo sapien
36	525	22.6	608	13 Q9PTW7	Q9PTW7 struthio ca
37	523	22.5	612	13 Q804W7	Q804W7 fugu rubrip
38	512	22.0	607	13 Q91001	Q91001 gallus galli
39	479.5	20.6	340	11 Q80Y26	Q80Y26 mus musculu
40	477.5	20.5	653	11 Q8YC54	Q8YC54 mus musculu
41	475	20.4	681	13 Q7Z7T0	Q7Z7T0 laopetra ja
42	470	20.2	399	11 Q9COW3	Q9COW3 mus musculu
43	457	19.7	540	13 Q800Y7	Q800Y7 neolegrist g
44	456	19.6	680	5 Q868H5	Q868H5 branchiosto
45	440.5	19.0	1379	5 Q9V4N6	Q9V4N6 drosophila

ALIGNMENTS

RESULT 1

ID Q9TRR0 PRELIMINARY; PRT; 456 AA.
AC Q9TRR0;
DT 01-MAY-2000 (TREMBLrel. 13, Created)
DT 01-MAY-2000 (TREMBLrel. 13, Last sequence update)
DT 01-OCT-2003 (TREMBLrel. 25, Last annotation update)
DE Protein C precursor.
OS PROOC.
CN Canis familiaris (Dog).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
CC Mammalia; Eutheria; Carnivora; Fissipedia; Canidae; Canis.
CX NCBI_TaxId=9615;
RN [1]
RP SEQUENCE FROM N.A.
RA Leeb T., Kopp T., Deppe A., Breen M., Matis U., Brumberg L.,
RA Breenig B.,
RT "Molecular characterization and chromosomal assignment of the canine
RT protein C gene.";
RT Mamm. Genome 10:135-139 (1999).
RN [2]
RP SEQUENCE FROM N.A.
RX MEDLINE=9371952; PubMed=10443005;
RA Leeb T., Pfeiffer I., Kopp T., Deppe A., Breenig B.,
RT "Analysis of canine protein C gene polymorphisms.";
RT Anim. Genet. 30:237-238 (1999).
CC -1- SIMILARITY: BELONGS TO PEPTIDASE FAMILY S1.
DR EMBL: A0001979; CAA05126.1; -.
DR HSP; P04070; IADT.
DR GO: GO:0005576; C:extracellular; IEA.
DR GO: GO:0005509; F:calcium ion binding; IEA.
DR GO: GO:0004263; F:chymotrypsin activity; IEA.
DR GO: GO:0008233; F:peptidase activity; IEA.
DR GO: GO:0004295; F:trypsin activity; IEA.
DR GO: GO:0005508; P:proteolysis and peptidolysis; IEA.
DR Interpro: IPR00152; Asx_hydroxyl_S.
DR Interpro: IPR009003; Cys_ser_crypsin.
DR Interpro: IPR00181; EGF_Ca.
DR Interpro: IPR006209; EGF_like.

DR PROSITE; PS00134; TRYPSIN_HIS; 1.
DR PROSITE; PS00135; TRYPSIN_SER; 1.
KW Hydroxylase; Serine protease; Blood coagulation; Zymogen; Glycoprotein;
KW Liver; Plasma; Vitamin K; Calcium-binding; Gamma-carboxyglutamic acid;
KW EGF-like domain; Repeat; Signal; Hydroxylation.
FT SIGNAL 1 24
FT PROPEP 25 41
FT CHAIN 42 193
FT CHAIN 194 446
FT DOMAIN 47 76
FT DOMAIN 87 123
FT DOMAIN 128 169
FT DOMAIN 194 446
FT SITE 193 194
FT ACT_SITE 234 234
FT ACT_SITE 283 283
FT ACT_SITE 385 385
FT BINDING 379 379
FT DISULFID 58 63
FT DISULFID 91 102
FT DISULFID 96 111
FT DISULFID 113 122
FT DISULFID 132 143
FT DISULFID 139 153
FT DISULFID 155 168
FT DISULFID 176 205
FT DISULFID 200 205
FT DISULFID 219 235
FT DISULFID 351 370
FT DISULFID 381 409
FT MOD_RES 47 47
FT MOD_RES 48 48
FT MOD_RES 55 55
FT MOD_RES 57 57
FT MOD_RES 60 60
FT MOD_RES 61 61
FT MOD_RES 66 66
FT MOD_RES 67 67
FT MOD_RES 70 70
FT MOD_RES 76 76
FT MOD_RES 104 104
FT MOD_RES 186 186
FT CARBOHYD 244 244
SQ SEQUENCE 446 AA; 50276 MW; 2512E4A4A5CB96E CRC64;
Query Match 33.1%; Score 770; DB 1; Length 446;
Best Local Similarity 38.8%; Pred. No. 2.4e-53;
Matches 163; Conservative 71; Mismatches 150; Indels 36; Gaps 10;
QY 1 ANSLLELRHSLEECIEEFCDEFEAKELFONVDTLAFMSKHVGDQCLVLPLEHPCA 60
DB 42 ANSLLELRHSLEECIEEFCDEFEAKELFONVDTLAFMSKHVGDQCLVLPLEHPCA 95
QY 61 SLCCGSGTCIDIGSGFSCDCRSWGEGRCOREVS-FLNCSLDNGGCTHAYCLEEVGMR-C 118
DB 96 --CQNGTCQDHLKSYVCFCLDPFGNCKSKNEQLICANENGDCDYCRDHWGTRKTC 153
QY 119 SCAPGYKLGIDLLIQCHPAKFPCCRPWKMEKKRSHLKRDEDEQDVDFRLIDGKTRR 178
DB 154 SCHEBYTLQPEVSCPEKVEYPCGR-IPVVEKRNSSRQG-----RIVGANVCPK 202
QY 179 GDSFQVYLLDSKGLACGAVLHPSVWLTAAHCNDESK--KLVRLGEYDLRRWEKWE 235
DB 203 GECFQWAV-LKINGLLCGAVLDAKAVITAAHCFDNRWGNITVVMGHHDFSEKQDE 261
QY 236 LDDIKVEFVHPNYSKSTYNDIALHLAQATLSQTVPICLPDSGLARELNAGQET 295
DB 262 QVRATVQVMPDKYINGKINBDIALRLHRPVTFPTYVPLCLPEKSFSENTIARI-RFS 320
QY 296 LVTGNGHSSREKAKRNTFYANFKIPVPHNCESEYMSN-----NISENMLCAGILG 350
DB 321 RVSGWGQLDRGATA-----LELMSIEVPRLLMTQDLCHRAKSSNTPKLTENNFCAGTMD 375

QY 351 DRQDACEGDSGGPWVASFHGTWFLVGLVSWGEGGCLLHNYGYTVVSXYDWTGHIRDK 410
DB 376 GTDACKGDSGGPWVASFHGTWFLVGLVSWGEGGCAIGHI GYTVVSQYIDWLVRHMDSK 435
Search completed: June 2, 2004, 16:56:13
Job time : 38 secs

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FT DOMAIN 46 82 EGF-LIKE 1, CALCIUM-BINDING (POTENTIAL).
FT DOMAIN 87 128 EGF-LIKE 2.
FT DOMAIN 153 407 SERINE PROTEASE.
FT SITE 152 153 CLEAVAGE (BY FACTOR XA, FACTOR XIIA,
ACT SITE 193 193 FACTOR IXA, OR THROMBIN).
ACT SITE 242 242 BY SIMILARITY.
ACT SITE 242 242 BY SIMILARITY.
ACT SITE 344 344 BY SIMILARITY.
ACT SITE 338 338 SUBSTRATE (BY SIMILARITY).
BINDING 17 22 BY SIMILARITY.
DISULFID 50 61 BY SIMILARITY.
DISULFID 55 70 BY SIMILARITY.
DISULFID 72 81 BY SIMILARITY.
DISULFID 91 102 BY SIMILARITY.
DISULFID 98 112 BY SIMILARITY.
DISULFID 114 127 BY SIMILARITY.
DISULFID 135 262 BY SIMILARITY.
DISULFID 159 164 BY SIMILARITY.
DISULFID 178 194 BY SIMILARITY.
DISULFID 310 329 BY SIMILARITY.
DISULFID 340 368 BY SIMILARITY.
MOD RES 6 6 GAMMA-CARBOXYGLUTAMIC ACID.
MOD RES 7 7 GAMMA-CARBOXYGLUTAMIC ACID.
MOD RES 14 14 GAMMA-CARBOXYGLUTAMIC ACID.
MOD RES 16 16 GAMMA-CARBOXYGLUTAMIC ACID.
MOD RES 19 19 GAMMA-CARBOXYGLUTAMIC ACID.
MOD RES 20 20 GAMMA-CARBOXYGLUTAMIC ACID.
MOD RES 25 25 GAMMA-CARBOXYGLUTAMIC ACID.
MOD RES 26 26 GAMMA-CARBOXYGLUTAMIC ACID.
MOD RES 29 29 GAMMA-CARBOXYGLUTAMIC ACID.
MOD RES 35 35 GAMMA-CARBOXYGLUTAMIC ACID.
MOD RES 52 52 O-LINKED (GLC. . .).
CARBOHYD 145 145 N-LINKED (GLCNAC. . .).
CARBOHYD 203 203 N-LINKED (GLCNAC. . .).
SEQUENCE 407 AA; 44431 MW; 703ELFED635F7710 CRC64;

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Query Match 33.5%; Score 779.5; DB 1; Length 407;
Best Local Similarity 39.6%; Pred. No. 3,9e-54;
Matches 166; Conservative 64; Mismatches 150; Indels 39; Gaps 11;

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QY 1 ANSFLEELARHSIERCEICDPEAKELFOVNDTLAFMSKVDQCLVPLEHCA 60
DB 1 ANGFLEELPESLERECRELCSFEAEHIFRNEETRFQWVYNDQCL-----AS 52
QY 61 SLCCGHTCLDITIGSSCDRCSGMEGRPCQR-VSFNCSLDNGCTHYCLEBVG-WRRC 118
DB 53 SPQNGSGCEDQLRSYICCPDGFEGNRCETDQSLICANDNGGCEQYQADPGAGRFC 112
QY 119 SCAPGYKLGDDLLQCHPAVKFPGCPKGRMEKRSILKKTUDEQDQVDPRLIDGKTRR 178
DB 113 WCEBEGYALQADVSCAPVEYPCGR-IPVELEKNG-----SKPGRIVGGRVCPK 161
QY 179 GSPPOVVLDSKKKLLACGAVLIHPSVLTPLAHQMDSEK--KLVLRLGEYDLRMEKME 235
DB 162 GGEPMQ-AMLTGALICGGLTVGAYVVAHCFRLSRKRLTAVALSHDLSRVEGE 220
QY 236 LIDIDKEVFVHPNYSKTTDNDIALHLQAPLISQTVPLCLDPSGLAREINQAGET 295
DB 221 QERVAQIIVPKQVPGQTDHVALQLAQVALGDAHVAPLCLDPDPAQDTLAFV-BFS 279
QY 296 LVTGNGHSREKAKAKRNFVLANIKIPIVPAHEGSEYMSN-----MSENLCAGLIG 350
DB 280 AVSGGOLLERGVTRK-----LMVVLVRLTLQDCLQOSRPGGPPVTNNFCAGSD 334
QY 351 DRDADCEGDSGSPVVAFFHGTFVLVGVSMGEGGLHNYGVYTVRSYLDWTH--GH 406
DB 335 GSDACKDSDSGSPHATFRGTWFLTIGSVISKEGCAAGHGFYTVNSYITAMRLQMGH 393

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RESULT 15
FASTA MOUSE
ID FAST MOUSE
AC P70375;
STANDARD;
PRT; 446 AA.

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DT 01-NOV-1997 (rel. 35, Created)
DT 01-NOV-1997 (rel. 35, Last sequence update)
DT 10-OCT-2003 (rel. 42, Last annotation update)
DE Coagulation factor VII precursor (EC 3.4.21.21) (serum prothrombin
DE conversion accelerator).
GN F7 OR CFI.
OS Mus musculus (Mouse).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Rodentia; Sciurognathu; Muridae; Murinae; Mus.
OC NCBI_TaxID=10090;
RN [1]
RP SEQUENCE FROM N. A.
RX MEDLINE=97127167; PubMed=8972017;
RA Idusogie E., Rosen E.D., Carmeliet P., Collen D., Castellino F.J.;
RT "Nucleotide structure and characterization of the murine blood
RT coagulation factor VII gene."
RL Thromb. Haemost. 76:957-964(1996).
CC -1- FUNCTION: Circulates in the blood in a zymogen form. Factor VII is
CC converted to factor VIIa by factor Xa, factor XIIa, factor Ixa, or
CC thrombin by minor proteolysis. In the presence of tissue factor
CC and calcium ions, factor VIIa then converts factor X to factor Xa
CC by limited proteolysis. Factor VIIa will also convert factor IX to
CC factor IXa in the presence of tissue factor and calcium (by
CC similarity).
CC -1- CATALYTIC ACTIVITY: Hydrolyzes one Arg-Ile bond in factor X to
CC form factor Xa.
CC -1- SUBUNIT: Heterodimer of a light chain and a heavy chain linked by
CC a disulfide bond (by similarity).
CC -1- TISSUE SPECIFICITY: Plasma.
CC -1- PTM: The vitamin K-dependent, enzymatic carboxylation of some
CC glutamate residues allows the modified protein to bind calcium (by
CC similarity).
CC -1- SIMILARITY: Belongs to peptidase family S1.
CC -1- SIMILARITY: Contains 2 EGF-like domains.
CC
CC This SWISS-PROT entry is copyright. It is produced through a collaboration
CC between the Swiss Institute of Bioinformatics and the EMBL outstation -
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CC entities requires a license agreement (see http://www.isb-sib.ch/announce/
CC or send an email to license@isb-sib.ch).
CC
CC EMBL; U66079; AAC3796.1; -.
CC HSSP; P08709; 1BF9.
CC MEROPS; S01.215; -.
CC MGD; MGI:109325; F7.
CC InterPro; IPR000152; Asx hydroxyl S.
CC InterPro; IPR0009003; Cys Ser trypsin.
CC InterPro; IPR000742; EGF 2.
CC InterPro; IPR001861; EGF Ca.
CC InterPro; IPR001438; EGF 11.
CC InterPro; IPR006209; EGF like.
CC InterPro; IPR002383; GLA blood.
CC InterPro; IPR001314; Peptidase S1.
CC InterPro; IPR000294; VitK_dep_GLA.
CC Pfam; PF00008; EGF; 2.
CC Pfam; PF00594; gla; 1.
CC Pfam; PF00089; trypsin; 1.
CC PRINTS; PR00722; CHEMOTRYPSIN.
CC PRINTS; PR00010; EGFRIOD.
CC PRINTS; PR00001; GLABLOD.
CC SMART; SM00179; EGF_CA; 1.
CC SMART; SM00069; GLA; 1.
CC SMART; SM00020; TRYP_SPC; 1.
CC PROSITE; PS00010; ASX_HYDROXYL; 1.
CC PROSITE; PS00022; EGF_1; 1.
CC PROSITE; PS01186; EGF_2; FALSE_NEG.
CC PROSITE; PS00026; EGF_3; 1.
CC PROSITE; PS01187; EGF_CA; 1.
CC PROSITE; PS00011; GLU_CARBOXYLATION; 1.
CC PROSITE; PS50240; TRYPSIN_DOM; 1.

```


RL Br. J. Haematol. 101:47-49(1998).
 RN [22]
 RP VARIANTS MALTA THR-194 AND VAL-304.
 RX MEDLINE=98112461; PubMed=9452082;
 RA Alshinawi C., Scerri C., Galdies R., Aquilina A., Felice A.E.;
 RT "Two new missense mutations (P134T and A244V) in the coagulation
 factor VII gene.";
 RN Hum. Mutat. Suppl. 1:S189-S191(1998).
 RN [23]
 RP VARIANTS ASP-295 AND GLN-413.
 RX MEDLINE=99318093; PubMed=10391209;
 RA Cagill M., Altschuler D., Ireland J., Sklar P., Ardlie K., Patel N.,
 Shaw N., Lane C.R., Lim E.P., Kalyanarman N., Nemes J., Ziaugra L.,
 Friedland L., Rolfe A., Harrington J., Lipshutz R., Daley G.O.,
 RA Lander E.S.;
 RT "Characterization of single-nucleotide polymorphisms in coding regions
 of human genes.";
 RL Nat. Genet. 22:231-238(1999).

Query Match 33.7%; Score 783; DB 1; Length 466;
 Best Local Similarity 38.8%; Pred. No. 2,46-54;
 Matches 164; Conservative 76; Mismatches 147; Indels 36; Gaps 10;

QY 1 ANSPLELRHSLSRECEIEICDFEAEKIFQNVDTLAFWSKHYDGDQCLVPLEHPCA 60
 DB 61 ANAFLELRPSLSRECEIEICDFEAEKIFQNVDTLAFWSKHYDGDQCLVPLEHPCA 112
 QY 61 SLGCGTCTIDISFSCDGRSGEGRFQ-REVSFLNGLDNGCTHICIEVQNR-C 118
 DB 113 SPQNGSGCKDQLQSYICFCIPAFEGRNCEHKKDOLICVNEGCEQEGSDHTGKSC 172
 QY 119 SCAPYKLGDDLLQCHPVKPCGRPMKMKESHKRTEDQEDQVDPRLIDKMTTR 178
 DB 173 RCHGSLADSVSTPVEPCGK-IPLLEKNA-----SKQGIIVGKTCCK 221
 QY 179 GDSFWQVLLIDSKKILACGANVLIHPSVLTAAHCKWDSK---KLIVRLGEYDLREKME 235
 DB 222 GECWQVLLIDVAGAL-CGFTLINTLIVWVAHCPDKIKWRLLAVAGEHDLSHDGDE 280
 QY 226 LDLDIVKVPVHNYSKSTTNDLALHLAQPTLSQTVICLPSDGLAEFLNAQAGT 295
 DB 281 QSRVAVQVLIIPSTYPTGTTHDIALRLHQPVLLIDHVPVLCIPETSEKTLAFV-RSS 339
 QY 296 LVTGCGVHSSREKAKRRTVNFIKIPVPHNCSHVN-----SNMVSNNLCAGILG 350
 DB 340 LVSGWGLDRAITA-----LELMTANVRIMTQDCIQSRKGSBNITVEMCAQYSD 394
 QY 351 DRDACEGDSGGPMVAFHGTPLVGLVSWGSCGLMNNYGVYTKVSRYLIMHGHTRDK 410
 DB 395 GSKGSCKDGSGPHMTHRGVWLTGLVSWGSCATVGHGVYTRVSYIWLQKLRSE 454
 QY 411 EAP 413
 DB 455 RRP 457

RESULT 14

ID FAV BOVIN STANDARD; PRT; 407 AA.
 AC P22457;
 DT 01-AUG-1991 (Rel. 19, Created)
 DT 01-AUG-1991 (Rel. 19, Last sequence update)
 DT 10-OCT-2003 (Rel. 42, Last annotation update)
 DE Coagulation factor VII (BC 3.4.21.21) (Serum prothrombin conversion
 accelerator).
 DE F7.
 GN Bos taurus (Bovine).
 OC Eukaryota; Chordata; Craniata; Vertebrata; Euteleostomi;
 OC Mammalia; Eutheria; Cetartiodactyla; Ruminantia; Pecora; Bovidea;
 OC Bovidae; Bovinae; Bos.
 OC NCBI_TaxId=9913;
 RN [1]
 RP SEQUENCE.

RX MEDLINE=89008362; PubMed=3049594;
 RA Takeya H., Kawabata S., Nakagawa K., Yamamichi Y., Miyata T.,
 RA Iwanaga S.;
 RT "Bovine factor VII. Its purification and complete amino acid
 sequence.";
 RL J. Biol. Chem. 263:14868-14877(1988).
 RN [2]
 RP STRUCTURE OF CARBOHYDRATE ON SER-52.
 RX MEDLINE=89213999; PubMed=3149637;
 RA Hase S., Kawabata S., Nishimura H., Takeya H., Sueyoshi T.,
 RA Miyata T., Iwanaga S., Takao T., Shionouchi Y., Ikenaka T.;
 RT "A new trisaccharide sugar chain linked to a serine residue in bovine
 blood coagulation factors VII and IX.";
 RL J. Biochem. 104:867-868(1988).
 RN [3]
 RP STRUCTURE OF CARBOHYDRATE ON SER-52.
 RX MEDLINE=91344709; PubMed=2129367;
 RA Iwanaga S., Nishimura H., Kawabata S., Kistiel W., Hase S., Ikenaka T.;
 RT "A new trisaccharide sugar chain linked to a serine residue in the
 first BGF-like domain of clotting factors VII and IX and protein Z.";
 RL Adv. Exp. Med. Biol. 281:121-131(1990).
 CC -1- FUNCTION: Circulates in the blood in a zymogen form. Factor VII is
 converted to factor VIIa by factor Xa, factor XIIa, factor IXa, or
 thrombin by minor proteolysis. In the presence of tissue factor
 and calcium ions, factor VIIa then converts factor X to factor Xa
 by limited proteolysis. Factor VIIa will also convert factor IX to
 factor IXa in the presence of tissue factor and calcium.
 CC -1- CATALYTIC ACTIVITY: Hydrolyzes one Arg-|-Ile bond in factor X to
 form factor Xa.
 CC -1- SUBUNIT: Heterodimer of a light chain and a heavy chain linked by
 a disulfide bond.
 CC -1- TISSUE SPECIFICITY: Plasma.
 CC -1- PTM: The vitamin K-dependent, enzymatic carboxylation of some
 glutamate residues allows the modified protein to bind calcium.
 CC -1- SIMILARITY: Belongs to peptidase family S1.
 CC -1- SIMILARITY: Contains 2 EGF-like domains.
 DR FIR; A31979; KFB07.
 DR HSP; P08709; IBF9.
 DR MEROPS; S01.215; -.
 DR Interpro: IPR000152; Asx hydroxyl S.
 DR Interpro: IPR009003; Cys ser-trypsin.
 DR Interpro: IPR00742; EGF-2.
 DR Interpro: IPR001881; EGF-Ca.
 DR Interpro: IPR001438; EGF-11.
 DR Interpro: IPR006209; EGF-like.
 DR Interpro: IPR002383; GLA blood.
 DR Interpro: IPR001254; peptidase S1.
 DR Interpro: IPR001314; peptidase S1a.
 DR Interpro: IPR00294; VitK_dep GLA.
 DR Pfam; PF00008; EGF; 2.
 DR Pfam; PF00594; gla; 1.
 DR Pfam; PF00089; trypsin; 1.
 DR PRINTS; PR00722; CHYMOTRYPSIN.
 DR PRINTS; PR00010; EGFBLDOD.
 DR PRINTS; PR00001; GLAHLOD.
 DR SMART; SM00179; EGF_CA; 1.
 DR SMART; SM00069; GLA; 1.
 DR SMART; SM00020; TRYD_SPC; 1.
 DR PROSITE; PS00010; ASX HYDROXYL; 1.
 DR PROSITE; PS00022; EGF_1; 1.
 DR PROSITE; PS01186; EGF_2; 2.
 DR PROSITE; PS00026; EGF_3; 1.
 DR PROSITE; PS01187; EGF_CA; 1.
 DR PROSITE; PS00011; GLU CARBOXYLATION; 1.
 DR PROSITE; PS00240; TRYPSIN_DOM; 1.
 DR PROSITE; PS00134; TRYPSIN_HIS; 1.
 DR PROSITE; PS00135; TRYPSIN_SER; 1.
 KM Hydroxylase; Serine protease; Blood coagulation; Zymogen; Glycoprotein;
 KW Liver; Plasma; Vitamin K; Calcium-binding; Gamma-carboxyglutamic acid;
 KW EGF-like domain; Repeat.
 FT CHAIN 1 152 FACTOR VII LIGHT CHAIN.
 FT CHAIN 153 407 FACTOR VII HEAVY CHAIN.
 FT DOMAIN 6 35 GLA-RICH.

- RA MEDLINE=8908153; PubMed=3264725;
RA Thim L., Bjoern S., Christensen M., Nicolaisen E.M., Lund-Hansen T.,
RA Pedersen A.H., Hedner U.;
RT "Amino acid sequence and posttranslational modifications of human
RT factor VIIa from plasma and transfected baby hamster kidney cells.";
RL Biochemistry 27:7785-7793(1988).
RN [5]
RP CARBOHYDRATE-LINKAGE SITES SER-112 AND SER-120.
RX MEDLINE=91250411; PubMed=1904059;
RA Bjoern S., Foster D.C., Thim L., Wiberg F.C., Christensen M.,
RA Komiyama Y., Pedersen A.H., Kistel W.;
RT "Human plasma and recombinant factor VII. Characterization of O-
RT glycosylations at serine residues 52 and 60 and effects of site-
RT directed mutagenesis of serine 52 to alanine.";
RL J. Biol. Chem. 266:11051-11057(1991).
RN [6]
RP STRUCTURE OF CARBOHYDRATE ON SER-112.
RX MEDLINE=90062160; PubMed=2511201;
RA Nishimura H., Kawabata S., Kistel W., Hase S., Ikenaka T., Takao T.,
RA Shimonishi Y., Iwanaga S.;
RT "Identification of a disaccharide (Xyl-Glc) and a trisaccharide
RT (Xyl2-Glc) O-glycosidically linked to a serine residue in the first
RT epidermal growth factor-like domain of human factors VII and IX and
RT protein Z and bovine protein Z.";
RL J. Biol. Chem. 264:20320-20325(1989).
RN [7]
RP STRUCTURE OF CARBOHYDRATE ON SER-112.
RX MEDLINE=91344709; PubMed=219367;
RA Iwanaga S., Nishimura H., Kawabata S., Kistel W., Hase S., Ikenaka T.;
RT "A new trisaccharide sugar chain linked to a serine residue in the
RT first EGF-like domain of clotting factors VII and IX and protein Z.";
RL Adv. Exp. Med. Biol. 281:121-131(1990).
RN [8]
RP X-RAY CRYSTALLOGRAPHY (2.0 ANGSTROMS) OF FVIIA IN COMPLEX WITH TF.
RX MEDLINE=96175641; PubMed=8598903;
RA Banner D.W., D'Arcy A., Chene C., Winkler F.K., Guha A.,
RA Konigsberg W.H., Nemerson Y., Kirchhofer D.;
RT "The crystal structure of the complex of blood coagulation factor
RT VIIa with soluble tissue factor.";
RL Nature 380:41-46(1996).
RN [9]
RP X-RAY CRYSTALLOGRAPHY (2.1 ANGSTROMS) OF FVIIA IN COMPLEX WITH TF.
RX MEDLINE=99126538; PubMed=9925787;
RA Zhang E., St Charles R., Tulinsky A.;
RT "Structure of extracellular tissue factor complexed with factor VIIa
RT inhibited with a BPTI mutant.";
RL J. Mol. Biol. 285:2089-2104(1999).
RN [10]
RP STRUCTURE BY NMR OF 105-145.
RX MEDLINE=98367502; PubMed=9692950;
RA Muranyi A., Film B.R., Gippert G.P., Forsen S., Stenflo U.,
RA Drakenberg T.;
RT "Solution structure of the N-terminal EGF-like domain from human
RT factor VII.";
RL Biochemistry 37:10605-10615(1998).
RN [11]
RP VARIANT GLN-364.
RX MEDLINE=91300046; PubMed=2070047;
RA O'Brien D.P., Gale K.M., Anderson J.S., McVey J.H., Miller G.J.,
RA Weade T.W., Tuddenham E.G.D.;
RT "Purification and characterization of factor VII 304-Gln: a variant
RT molecule with reduced activity isolated from a clinically unaffected
RT male.";
RL Blood 78:132-140(1991).
RN [12]
RP VARIANTS GLN-364 AND PHE-370
RX MEDLINE=92340074; PubMed=1634227;
RA Marchetti G., Patrachini P., Gemmati D., Derosa V., Pinotti M.,
RA Rodolfo G., Casonati A., Girolami A., Bernardi F.;
RT "Detection of two missense mutations and characterization of a repeat
RT polymorphism in the factor VII gene (F7).";
RL Hum. Genet. 89:497-502(1992).
RN [13]
RP VARIANT TYR-238.
RX MEDLINE=93372811; PubMed=8364544;
RA Marchetti G., Ferrati M., Patrachini P., Redaelli R., Bernardi F.;
RT "A missense mutation (178Cys->Tyr) and two neutral dimorphisms
RT (115His and 333Ser) in the human coagulation factor VII gene.";
RL Hum. Mol. Genet. 2:1055-1056(1993).
RN [14]
RP VARIANTS.
RX MEDLINE=94061028; PubMed=8242057;
RA Takamiya O., Kemball-Cook G., Martin D.M.A., Cooper D.N.,
RA von Felten A., Meili E., Hahn I., Prangnell D.R., Lumley H.,
RA Tuddenham E.G.D., McVey J.H.;
RT "Detection of missense mutations by single-strand conformational
RT polymorphism (SSCP) analysis in five dysfunctional variants of
RT coagulation factor VII.";
RL Hum. Mol. Genet. 2:1355-1359(1993).
RN [15]
RP VARIANTS CHARLOTTE GLN-139 AND GLN-212.
RX MEDLINE=94264305; PubMed=8204879;
RA Chaiang S., Clarke B., Sridhara S., Chu K., Friedman P., Vardusen W.,
RA Roberts H.R., Blajchman M., Monroe D.M., High K.A.;
RT "Severe factor VII deficiency caused by mutations abolishing the
RT cleavage site for activation and altering binding to tissue factor.";
RL Blood 83:3524-3535(1994).
RN [16]
RP VARIANT VAL-354.
RX MEDLINE=95072589; PubMed=7981691;
RA Bernardi F., Castaman G., Redaelli R., Pinotti M., Lunghi B.,
RA Rodeghiero F., Marchetti G.;
RT "Morphologically equivalent mutations causing dysfunctional coagulation
RT factors VII (294Aa->Val) and X (334Ser->Pro).";
RL Hum. Mol. Genet. 3:1175-1177(1994).
RN [17]
RP VARIANT MET HIS-307.
RX MEDLINE=95064662; PubMed=7974346;
RA Ohiwa M., Hayashi T., Wada H., Minamikawa K., Shirakawa S.,
RA Suzuki K.;
RT "Factor VII: heterozygous asymptomatic type I deficiency caused by
RT an amino acid substitution of His (C6C) for Arg(247) (C6C) in the
RT catalytic domain.";
RL Thromb. Haemost. 71:773-777(1994).
RN [18]
RP VARIANT MET-419.
RX MEDLINE=96247510; PubMed=8652821;
RA Arbini A.A., Mannucci P.M., Bauer K.A.;
RT "A Thrs59Met mutation in factor VII of a patient with a hereditary
RT deficiency causes defective secretion of the molecule.";
RL Blood 87:5085-5094(1996).
RN [19]
RP VARIANTS TRP-283; LYS-325; VAL-358; GLN-364; GIN-402 AND GLN-413.
RX MEDLINE=97001216; PubMed=8844208;
RA Bernardi F., Castaman G., Pinotti M., Ferraresi P., di Iasio M.G.,
RA Lunghi B., Rodeghiero F., Marchetti G.;
RT "Mutation pattern in clinically asymptomatic coagulation factor VII
RT deficiency.";
RL Hum. Mutat. 8:108-115(1996).
RN [20]
RP VARIANT VAL-304.
RX MEDLINE=97037613; PubMed=8883260;
RA Tamary H., Fromovich Y., Salmon L., Reich Z., Dym O., Lamlir N.,
RA Brenner B., Paz M., Luder A.S., Blau O., Korostishevsky M.,
RA Zaitov R., Seligson U.;
RT "Ala244Val is a common, probably ancient mutation causing factor VII
RT deficiency in Moroccan and Iranian Jews.";
RL Thromb. Haemost. 76:283-291(1996).
RN [21]
RP VARIANT MORIOKA PRO-13.
RX MEDLINE=98235713; PubMed=9576180;
RA Ozawa T., Takikawa Y., Niya K., Ejiri N., Suzuki K., Sato S.,
RA Sakuragawa N.;
RT "Factor VII Moriooka (FVII L-26P): a homozygous missense mutation in
RT the signal sequence identified in a patient with factor VII
RT deficiency.";

DR Pfam: PF00089; trypsin. 1.
 DR PRINTS: PRO0722; CHYMOTRYPSIN.
 DR PRINTS: PR00010; EGFLOOD.
 DR PRINTS: PR00001; GLABLOOD.
 DR SMART: SM00179; EGF_CA; 1.
 DR SMART: SM00069; GLA; 1.
 DR SMART: SM00020; TRYPSIN; 1.
 DR PROSITE: PS00010; ASX_HYDROXYL; 1.
 DR PROSITE: PS00022; EGF_1; 1.
 DR PROSITE: PS01186; EGF_2; 2.
 DR PROSITE: PS00026; EGF_3; 1.
 DR PROSITE: PS01187; EGF_CA; 1.
 DR PROSITE: PS00011; GLU_CARBOXYLATION; 1.
 DR PROSITE: PS00240; TRYPSIN_DOM; 1.
 DR PROSITE: PS00134; TRYPSIN_HIS; 1.
 DR PROSITE: PS00135; TRYPSIN_SER; 1.
 DR Glycoprotein; Hydrolase; Serine protease; Plasma; blood coagulation;
 KM Gamma-carboxyglutamic acid; Hydroxylation; Calcium-binding; Vitamin K;
 KM Signal; Zymogen; EGF-like domain; Repeat.
 FT SIGNAL 1 20 OR 30, OR 31 (POTENTIAL).
 FT PROPEP 21 40
 FT CHAIN 41 180 FACTOR X LIGHT CHAIN.
 FT CHAIN 186 475 FACTOR X HEAVY CHAIN.
 FT PROPEP 186 241 ACTIVATION PEPTIDE.
 FT CHAIN 242 475 ACTIVATED FACTOR XA, HEAVY CHAIN.
 FT DOMAIN 86 122 EGF-LIKE 1, CALCIUM-BINDING (POTENTIAL).
 FT DOMAIN 125 168 EGF-LIKE 2.
 FT DOMAIN 241 475 SERINE PROTEASE.
 FT MOD_RES 46 46 GAMMA-CARBOXYGLUTAMIC ACID
 FT MOD_RES 47 47 (BY SIMILARITY).
 FT MOD_RES 54 54 GAMMA-CARBOXYGLUTAMIC ACID
 FT MOD_RES 54 54 (BY SIMILARITY).
 FT MOD_RES 56 56 GAMMA-CARBOXYGLUTAMIC ACID
 FT MOD_RES 59 59 (BY SIMILARITY).
 FT MOD_RES 59 59 GAMMA-CARBOXYGLUTAMIC ACID
 FT MOD_RES 60 60 (BY SIMILARITY).
 FT MOD_RES 65 65 GAMMA-CARBOXYGLUTAMIC ACID
 FT MOD_RES 65 65 (BY SIMILARITY).
 FT MOD_RES 66 66 GAMMA-CARBOXYGLUTAMIC ACID
 FT MOD_RES 69 69 (BY SIMILARITY).
 FT MOD_RES 72 72 GAMMA-CARBOXYGLUTAMIC ACID
 FT MOD_RES 72 72 (BY SIMILARITY).
 FT MOD_RES 79 79 GAMMA-CARBOXYGLUTAMIC ACID
 FT MOD_RES 79 79 (BY SIMILARITY).
 FT MOD_RES 103 103 HYDROXYLATION (BY SIMILARITY).
 FT ACT_SITE 282 282 CHARGE RELAY SYSTEM (BY SIMILARITY).
 FT ACT_SITE 328 328 CHARGE RELAY SYSTEM (BY SIMILARITY).
 FT ACT_SITE 425 425 CHARGE RELAY SYSTEM (BY SIMILARITY).
 FT DISULFID 90 101 BY SIMILARITY.
 FT DISULFID 95 110 BY SIMILARITY.
 FT DISULFID 112 121 BY SIMILARITY.
 FT DISULFID 129 140 BY SIMILARITY.
 FT DISULFID 136 152 BY SIMILARITY.
 FT DISULFID 154 167 BY SIMILARITY.
 FT DISULFID 175 348 INTERCHAIN (BY SIMILARITY).
 FT DISULFID 247 252 BY SIMILARITY.
 FT DISULFID 267 283 BY SIMILARITY.
 FT DISULFID 396 410 BY SIMILARITY.
 FT DISULFID 421 449 BY SIMILARITY.
 FT CARBOHYD 196 196 N-LINKED (GLCNAC...) (POTENTIAL).
 FT CARBOHYD 207 207 N-LINKED (GLCNAC...) (POTENTIAL).
 FT CARBOHYD 228 228 N-LINKED (GLCNAC...) (POTENTIAL).
 FT CARBOHYD 285 285 N-LINKED (GLCNAC...) (POTENTIAL).
 SQ SEQUENCE 475 AA; 53142 MW; 570BF849565C74D CRC64;

Query Match 34.5%; Score 801.5; DB 1; Length 475;
 Best Local Similarity 36.1%; Pred. No. 8.6e-56;

Matches 163; Conservative 84; Mismatches 147; Indels 57; Gaps 8;
 QY 1 ANSPLELNHSSLERECEIEICPEEAKIFQVNDYDTLAFMSKENVGGQCLPLHPRA 60
 D 41 ANSPLEEMQNIERECEBERCSKEBAEFEDNEKTEEFNNIYVDGQCSNP----- 94
 QY 61 SLCCGGCTCIDIGSPSCDGRSMEBERFCQREVFANCSLDNGGCTHYCLEVGMAR--- 117
 D 95 --CHYGQCKDGLASLYTCSCLIDYGQCKCEPVIP-KYCKLNNGDCQPCSLKSVQKDV 151
 QY 118 CSAPGKLGDDLLQCHPAVPCGAPWMEKEKRSLSKED-----TEDQ----- 162
 D 132 CSCTSGVIELABGKCVSKYKPCGVLMKRIKRSVLLPFTNSNTATSDQVPSNTGSL 211
 QY 163 -----EDQVPEPLDGKMTREGDSFWQVTLDSKKKALACAVL 200
 D 212 EEVFTTTSPTPPRNGSSITDPNVDTRIIVGDECRPGCEPQAVLINKEGEEFCGGTI 271
 QY 201 IHPGWTITAAHCEMDSKCLVLRGEVDLRMEKWELEDDIKETVHPNYSSTTDNDIAL 260
 D 272 INEDPILTPAHCHNOSKEIKVVGVEVDREKESHSTHTNAKLFVASKYIAETTDNDIAL 331
 QY 261 LHLAQPATLSQITVPCIPDSGLAREEL-NQAGQETLVTVGYSREKAKRNTEFVLN 319
 D 332 ICLKEPQFSEYVYVACIPQADFANBYLMNQ--KSGVSGRGEFPAGLSK-----LK 384
 QY 320 FKIPVPHNECEVMSNMSENMLCAGILSDROACGDSGCPMAVSHGIMPLVGLVS 379
 D 385 VLEVPYVDRSTCKQSTNFAITENMFCAGYETEDKDACCGSGGPHVTKDYFTVGTIVS 444
 QY 380 WEGGGLHNYGYTVTVSRVYLDTHGHIRDK 410
 D 445 WEGGCKARKKRGVTVKLSFLRWVTRWROK 475
 RESULT 13
 ID FA7_HUMAN STANDARD; PRT; 466 AA.
 AC P08709; Q14339;
 DT 01-JAN-1988 (Rel. 06, Created)
 DT 01-JAN-1988 (Rel. 06, Last sequence update)
 DT 10-OCT-2003 (Rel. 42, Last annotation update)
 DE Coagulation factor VII precursor (BC 3.4.21.21) (Serum prothrombin conversion accelerator) (Eptacog alfa).
 GN F7.
 OS Homo sapiens (Human).
 OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Homnidae; Homo.
 OC NCBI_TaxID=9606;
 RN [1]
 RP SEQUENCE FROM N.A.
 RC TISSUE=Liver;
 RX MEDLINE=86205965; PubMed=1486420;
 RA Hagen F.S., Gray C.L., O'Hara P.J., Grant F.J., Saari G.C., Woodbury R.G., Hart C.E., Inley M.Y., Kiesel W., Kurachi K., Davie E.W.;
 RT "Characterization of a cDNA coding for human factor VII.";
 RL Proc. Natl. Acad. Sci. U.S.A. 83:2412-2416(1986).
 RN [2]
 RP SEQUENCE FROM N.A.
 RX MEDLINE=87260948; PubMed=1037537;
 RA O'Hara P.J., Grant F.J., Haldeman B.A., Gray C.L., Inley M.Y., Hagen F.S., Murray M.J.;
 RT "Nucleotide sequence of the gene coding for human factor VII, a vitamin K-dependent protein participating in blood coagulation.";
 RL Proc. Natl. Acad. Sci. U.S.A. 84:5158-5162(1987).
 RN [3]
 RP SEQUENCE FROM N.A., AND VARIANTS THR-352; GLN-413 AND LYS-445.
 RA Rieder M.J., Armel T.Z., Carington D.P., Chung M.-W., Lee K.L., Poel C.L., Toth E.J., Yi Q., Nickerson D.A.;
 RL Submitted (JAN-2002) to the EMBL/GenBank/DBJ databases.
 RN [4]
 RP SEQUENCE OF 61-466, AND POST-TRANSLATIONAL MODIFICATIONS.

```

FT ACT_SITE 232 232 BY SIMILARITY.
FT ACT_SITE 281 281 BY SIMILARITY.
FT ACT_SITE 383 383 BY SIMILARITY.
FT BINDING 377 377 SUBSTRATE (BY SIMILARITY).
FT DISULFID 56 61 BY SIMILARITY.
FT DISULFID 89 100 BY SIMILARITY.
FT DISULFID 94 109 BY SIMILARITY.
FT DISULFID 111 120 BY SIMILARITY.
FT DISULFID 130 141 BY SIMILARITY.
FT DISULFID 137 151 BY SIMILARITY.
FT DISULFID 153 166 BY SIMILARITY.
FT DISULFID 174 301 BY SIMILARITY.
FT DISULFID 198 203 BY SIMILARITY.
FT DISULFID 217 233 BY SIMILARITY.
FT DISULFID 349 368 BY SIMILARITY.
FT DISULFID 379 407 BY SIMILARITY.
FT MOD_RES 45 45 GAMMA-CARBOXYGLUTAMIC ACID.
FT MOD_RES 46 46 GAMMA-CARBOXYGLUTAMIC ACID.
FT MOD_RES 53 53 GAMMA-CARBOXYGLUTAMIC ACID.
FT MOD_RES 55 55 GAMMA-CARBOXYGLUTAMIC ACID.
FT MOD_RES 58 58 GAMMA-CARBOXYGLUTAMIC ACID.
FT MOD_RES 59 59 GAMMA-CARBOXYGLUTAMIC ACID.
FT MOD_RES 64 64 GAMMA-CARBOXYGLUTAMIC ACID.
FT MOD_RES 65 65 GAMMA-CARBOXYGLUTAMIC ACID.
FT MOD_RES 68 68 GAMMA-CARBOXYGLUTAMIC ACID.
FT MOD_RES 74 74 GAMMA-CARBOXYGLUTAMIC ACID.
FT MOD_RES 102 102 HYDROXYLATION (BY SIMILARITY).
FT MOD_RES 102 102 N-LINKED (GLCNAC. .) (POTENTIAL).
FT CARBOHYD 211 211 N-LINKED (GLCNAC. .) (POTENTIAL).
FT CARBOHYD 242 242 N-LINKED (GLCNAC. .) (POTENTIAL).
FT CARBOHYD 306 306 N-LINKED (GLCNAC. .) (POTENTIAL).
SQ SEQUENCE 444 AA; 49011 MW; 0481ABCAFE5427F8 CRC64;

```

Query Match 34.5%; Score 802; DB 1; Length 444;

Best Local Similarity 40.2%; Pred. No. 7.3e-56;

Matches 170; Conservative 67; Mismatches 144; Indels 42; Gaps 11;

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QY 1 ANSFLELRHSLRECEIERICDFERAKIFQVNDYTLAFMSKHVDGDCIPLFENPCA 60
DB 40 ANSFLELRHSLRECEIERICDFERAKIFQVNDYTLAFMSKHVDGDCIPLFENPCA 60
QY 61 SLCGGHGTICDGLSGFSCDGRSGMBGRPCQEVN-PLNSLNGGCTHCLFVYKRR-C 118
DB 94 --CQNGSGCEQIOISYICFLADFEGRNCEKKNQDLIMYENSGCEYCSDHVSGQRSC 151
QY 119 SCAPGYKGGDLLOCHPAVVFPCGRPMKMKKSHLKEDTDQDQVDPELDGKQTER 178
DB 152 RCHGGTLLDPMGSCPTVDYPCGV-PAIKRKA-----SNQGRIVGKVCXK 200
QY 179 GSPNQVLLDSKKKXKACGAVLTHPSWVLTAAHGMDE--SKCLLVRLGEYDLRWKKE 235
DB 201 GEPNQALAMNG-STLLCGSLDTHWVSAHGFDTLSLRNTIVLGEHDLSEHGDE 259
QY 236 LDDIVKVFHNPNYSKSTNDIALHLAQAPTSQITVPCIPSGIAELMNGQGT 295
DB 260 QVNHVQQLIMPKYVPGKTDHIALRLQPAALNNVPLCLPFRNSESTLATT-RFS 318
QY 296 LVTGNG---YHSSREKAKENRTFVNLKIPVPHRCSEVW-----SNVSENMLCAG 347
DB 319 RVSGMQQLYRGALARE-----LMALDPRMLTMDPCVQSEHKPSPEVTSNMFQCG 370
QY 348 ILGPRDADCEGDSGGPMWASPHGTWFLVGLVSNMGSGGLHNYGYTYSYLDIMHGI 407
DB 371 YLGSKDKCKGSGSPHATSYHGTVYLLTGVSWMGCGAAGVHGYTVYSRYEMLSRLL 430
QY 408 RDK 410
DB 431 RSK 433

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RESULT 12
FA10_CHICK
ID FA10_CHICK STANDARD; PRT; 475 AA.
AC P25155;

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DT 01-MAY-1992 (Rel. 22, Created)
DT 01-MAY-1992 (Rel. 22, Last sequence update)
DT 15-MAR-2004 (Rel. 43, Last annotation update)
DE Coagulation factor X precursor (EC 3.4.21.6) (Stuart factor)
DE (Virus activating protease) (VAP).
GN FX.
OS Gallus gallus (Chicken).
OC Eukaryota; Metazoa; Chordata; Vertebrata; Euteleostomi;
OC Archosauria; Aves; Neognathae; Galliformes; Phasianidae; Phasianinae;
OC Gallus.
OC NCBI_TaxID=9031;
RN (1)
RP SEQUENCE FROM N.A.
RC TISSUE=Chorioallantoic membrane;
RC MEDLINE=91257322; PubMed=2044767;
RA Suzuki H., Harada A., Hayashi Y., Wada K., Asaka J.-I., Gotoh B.,
RA Ogatawara T., Nagai Y.,
RT "Primary structure of the virus activating protease from chick
RT embryo. Its identity with the blood clotting factor Xa.",
RL FEBS Lett. 283:281-285(1991).
RN (2)
RP SEQUENCE OF 41-55 AND 241-261.
RC TISSUE=Allantoic fluid;
RC MEDLINE=91065352; PubMed=2174359;
RA Gotoh B., Ogatawara T., Toyoda T., Innocencio N.M., Hanauchi M.,
RA Nagai Y.,
RT "An endoprotease homologous to the blood clotting factor X as a
RT determinant of viral tropism in chick embryo.",
RL EMBO J. 9:4189-4195(1990).
CC -1- FUNCTION: Factor Xa is a vitamin K-dependent glycoprotein that
CC converts prothrombin to thrombin in the presence of factor Va,
CC calcium and phospholipid during blood clotting.
CC -1- FUNCTION: VAP cleaves the fusion proteins of Sendai virus, NDV,
CC and influenza virus a at a specific single arginine-containing
CC site, and plays a key role in the viral spreading in the allantoic
CC sac.
CC -1- CATALYTIC ACTIVITY: Preferential cleavage: Arg-|-Thr and then
CC Arg-|-Ile bonds in prothrombin to form thrombin.
CC -1- SUBUNIT: The two chains are formed from a single-chain precursor
CC by the excision of two Arg residues and are held together by 1 or
CC more disulfide bonds.
CC -1- TISSUE SPECIFICITY: Liver and chorioallantoic membrane.
CC -1- PTM: The vitamin K-dependent, enzymatic carboxylation of some
CC glutamate residues allows the modified protein to bind calcium.
CC -1- PTM: THE ACTIVATION PEPTIDE IS CLEAVED BY FACTOR IXA (IN THE
CC INTRINSIC PATHWAY), OR BY FACTOR VIIA (IN THE EXTRINSIC PATHWAY).
CC -1- SIMILARITY: Belongs to peptidase family S1.
CC -1- SIMILARITY: Contains 2 EGF-like domains.
CC -----
CC This SWISS-PROT entry is copyright. It is produced through a collaboration
CC between the Swiss Institute of Bioinformatics and the EMBL outstation -
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CC use by non-profit institutions as long as its content is in no way
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CC or send an email to license@isb-sib.ch).
CC -----
CC EMBL, D00844; BA00724.1; -.
CC PIR, S15838; EXCH.
CC HSP, P00742; IHOG.
CC MEROPS, S01.216; -.
CC InterPro: IPR000152; Asx_hydroxyl_S.
CC InterPro: IPR009003; Cys_Ser_trypsin.
CC InterPro: IPR000742; EGF_2.
CC InterPro: IPR001891; EGF_Ca.
CC InterPro: IPR001438; EGF_II.
CC InterPro: IPR006209; EGF_like.
CC InterPro: IPR002383; GLA_blood.
CC InterPro: IPR001254; Peptidase_S1.
CC InterPro: IPR001314; Peptidase_S1A.
CC InterPro: IPR000294; ViCK_dep_GLA.
CC Pfam, PF00008; EGF_2.
CC Pfam, PF00594; gla_1.

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Query Match	34.8%;	Score 809;	DB 1;	Length 488;
Best Local Similarity	35.7%;	Pred. No. 2.3e-55;		
Matches 163;	Conservative	87;	Mismatches 151;	Indels 56;
				Gaps 9

```

Qy      61 SLCCGHCCTCIDGIGSFDCCRSMBGRPQGEVAFGLCSLDNGCTHCLCEEYGRARSC 120
      | | | | | | | | | | | | | | | | | | | | | | | | | | | |
Db      95 --CQNGCKDCDGLGYTCTCLGEFEGKCELFTRKL--CSLDNGDQDQCHEEONSIVGSC 150

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OY      121  APTGKLGDDLLGCHAVTFPGKRPWRKMKRSHLRKTDDEED-----QYD 165
        ||||| : ||| : : : : : : : : : : : : : : : : : : : : : :
Db      152  ARGTTLDNNGKACIPFGYPPGK--QTLEFRNRGSAQAQNTSSGGEAPDSTWKTDAALD 205

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DQ 168 P-----RIDSKATIRGDSPPKGVTVLLDSSKKKLACGAVALIHS 20
 | ||:::||:::||:::||:::||
Db 210 PTENPFDDLNPQTSPRGDNMLTRIVGGSECKDGECPCWALLINENEIGFCGGTILSHF 26

```

0x 205 WLTTPACWDESKULVTLGPIRRWEKLELDIDIEVFNHNPNSKSTDNIALHHA 26
    ::|||:::|:::|:::|:::|:::|:::|:::|:::|:::|:::|:::|:::|:::|
Db 270 YLTPAHCILQAFENKVEEDRWTEQEGSEAVHEVWVTKNPFKTEYDPIAVLRK 32

```

DQ 265 QPATSITVPICTPDGLAEKREINAGET-LVTMGHSSSEAKRNTFVLFIKI 32
| | : | | : | : : : | : :
DB 330 TITIRNNVAALTEPRDASTL--MTQKTIVSGGRTHEKRQSTR-----LMLEEV 38

QY 324 PVEPHNCSFWSNMVSENMLCAGILIGRQDAACEBGGGMVAASHGIMPLVLINVMGG 38
| | | | : : : : : : : : : : : : : : : :
DB 383 PYVRNCKSSFIITLNNFCAGYDTRKEDACQDSGGHATREKDTFTVTGISWGG 44

```

Oy      384 CGLLNHYGYTKYSRYLDMWHGHIRDNEAPQ-KSNAP 419
          ||:||||: || || :: |: || ||
Db      443 CARNGKYGYTKYAFELKWI DRSMKTGELPKAKSHAP 479

```

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RESULT 11
FAT_RABIT
ID_FAT_RABIT      STANDARD;      PRT;      444 AA.
AC      P98139; P79224;
DT      01-FEB-1996 (Rel. 33, Created)
DT      15-JUL-1998 (Rel. 36, Last sequence update)
DT      10-OCT-2003 (Rel. 42, Last annotation update)
DE      Coagulation factor VII precursor (EC 3.4.21.21) (Serum prothrombin
DE      conversion accelerator).
CN      27

```

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CC TISSUE-LAYER;
RA Ruiz S.R., Blajchman M.A., Clarke B.J.;
RL Submitted (NOV-1996) to the EMBL/GenBank/DBJ databases.
CC -1- FUNCTION: Circulates in the blood in a zymogen form. Factor VII is
CC converted to factor VIIa by factor Xa, factor XIIa, factor IXa, or
CC thrombin by minor proteolysis. In the presence of tissue factor
CC and calcium ions, factor VIIa then converts factor X to factor Xa
CC by limited proteolysis. Factor VIIa will also convert factor IX to
CC factor IXa in the presence of tissue factor and calcium (by
CC similarity).
CC -1- CATALYTIC ACTIVITY: Hydrolyzes one Arg-|-Ile bond in factor X to
CC form factor Xa.
CC -1- SUBUNIT: Heterodimer of a light chain and a heavy chain linked by
CC a disulfide bond (By similarity).
CC -1- TISSUE SPECIFICITY: Plasma.
CC -1- PM: The vitamin K-dependent, enzymatic carboxylation of some
CC glutamate residues allows the modified protein to bind calcium (By
CC similarity).
CC -1- SIMILARITY: Belongs to peptidase family S1.
CC -1- SIMILARITY: Contains 2 BGF-like domains.
CC -----
CC This SWISS-PROT entry is copyright. It is produced through a collaboration
CC between the Swiss Institute of Bioinformatics and the EMBL outstation at
CC the European Bioinformatics Institute. There are no restrictions on its
CC use by non-profit institutions as long as its content is in no way
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CC entities requires a license agreement (See http://www.isb-sib.ch/announce/
CC or send an email to license@isb-sib.ch).
CC -----
DR EMBL, U77477, AA837326.1; -.
DR HSSP, P08709, IFAK.
DR MEROPS, S01.215; -.
DR InterPro, IPR000152, Asx_hydroxyl_S.
DR InterPro, IPR009003, Cys_Ser_trypsin.
DR InterPro, IPR000742, EGF_2.
DR InterPro, IPR001881, EGF_Ca.
DR InterPro, IPR001438, EGF_II.
DR InterPro, IPR006209, EGF_like.
DR InterPro, IPR002383, GLA_Blood.
DR InterPro, IPR001254, Peptidase_S1.
DR InterPro, IPR001314, Peptidase_S1A.
DR InterPro, IPR000294, Vltk_dep_Gla.
DR Pfam, PF00008, EGF_2.
DR Pfam, PF00594, gla; 1.
DR Pfam, PF00089, trypsin; 1.
DR PRINTS, PR00722, CHYMOTRYPSIN.
DR PRINTS, PR0010, BGFLOOD.
DR PRINTS, PR0001, GLABLOOD.
DR SMART, SM00179, EGF_CA; 1.
DR SMART, SM00069, GLA; 1.
DR SMART, SM00020, TRYP_SPE; 1.
DR PROSITE, PS00010, ASX_HYDROXYL; 1.
DR PROSITE, PS00022, EGF_1; 1.
DR PROSITE, PS01186, EGF_2; 1.
DR PROSITE, PS00026, EGF_3; 1.
DR PROSITE, PS01187, EGF_CA; 1.
DR PROSITE, PS00011, GLU_CARBOXYLATION; 1.
DR PROSITE, PS0240, TRYPSIN_DOM; 1.
DR PROSITE, PS00134, TRYPSIN_HIS; 1.

```

61 SLCCGHTCTDIGISFSCDQRSGMEGRFCQ---KEVSFLNCSLJUNGSCMHCLEEVSMAN 11

RA Raha S.S., Loquellano N.A., Peters G.O., Adamson K.D., Murray S.O.

RA Raha S.S., Loquellano N.A., Peters G.O., Adamson K.D., Murray S.O.

DB 386 NSCRSSSTITONNECAGYDARPEDACQDSGPHVTRFDYTVTGIVSWGSCARKG 445
QY 389 NGVYTKSRYLWMLHGHIRDEAP 413
DB 446 KFGVYTKVSNPLMKIKSRAPAAVP 470

RESULT 9
P010 BOVIN STANDARD; PRT: 492 AA.
AC P00743;
DT 21-JUL-1986 (Rel. 01, Created)
DT 13-AUG-1987 (Rel. 05, Last sequence update)
DT 15-MAR-2004 (Rel. 43, Last annotation update)
DE Coagulation factor X precursor (EC 3.4.21.6) (Stuart factor).
GN F10.
OS Bos taurus (Bovine).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Cetartiodactyla; Ruminantia; Pecora; Bovidae;
OC Bovidae; Bovinae; Bos.
OX NCBI_TaxID=9913;
RN [1]
RP SEQUENCE OF 1-487 FROM N.A.
RX MEDLINE=84247315; PubMed=6330671;
RA Fung M.R., Campbell R.M., McGilivray R.T.A.;
RT "Blood coagulation factor X mRNA encodes a single polypeptide chain
containing a prepro leader sequence."
RL Nucleic Acids Res. 12:4481-4492(1984).
RN [2]
RP SEQUENCE OF 41-180.
RX MEDLINE=80130563; PubMed=6766735;
RA Enfield D.L., Ericsson L.H., Fujikawa K., Walsh K.A., Neurath H.,
RT "Amino acid sequence of the light chain of bovine factor XI (Stuart
factor)."
RL Biochemistry 19:659-667(1980).
RN [3]
RP REVISION TO 103.
RX MEDLINE=83308813; PubMed=6688526;
RA McMullen B.A., Fujikawa K., Kisiel W.;
RT "The occurrence of beta-hydroxyaspartic acid in the vitamin
K-dependent blood coagulation zymogens."
RL Biochem. Biophys. Res. Commun. 115:8-14(1983).
RN [4]
RP SEQUENCE OF 183-492, CARBOHYDRATE-LINKAGE SITES, AND DISULFIDE BONDS.
RX MEDLINE=76033069; PubMed=1050093;
RA Titani K., Fujikawa K., Enfield D.L., Ericsson L.H., Walsh K.A.,
RT "Bovine factor XI (Stuart factor): amino-acid sequence of heavy
chain."
RL Proc. Natl. Acad. Sci. U.S.A. 72:3082-3086(1975).
RN [5]
RP SEQUENCE OF 183-233, AND CARBOHYDRATE-LINKAGE SITES.
RX MEDLINE=94062825; PubMed=8243461;
RA Inoue K., Morita T.;
RT "Identification of O-linked oligosaccharide chains in the activation
peptides of blood coagulation factor X. The role of the carbohydrate
moieties in the activation of factor X."
RL Eur. J. Biochem. 218:153-163(1993).
RN [6]
RP ACTIVE SITE.
RX MEDLINE=7305314; PubMed=4264286;
RA Titani K., Hemodson M.A., Fujikawa K., Ericsson L.H., Walsh K.A.,
RT Neurath H., Davie E.W.;
RT "Bovine factor X Ia (activated Stuart factor). Evidence of homology
with mammalian serine proteases."
RL Biochemistry 11:4899-4903(1972).
RN [7]
RP PROCESSING.
RX MEDLINE=76053121; PubMed=1059122;
RA Fujikawa K., Titani K., Davie E.W.;
RT "Activation of bovine factor X (Stuart factor): conversion of factor
Xa-alpha to factor Xa-beta.";

RL Proc. Natl. Acad. Sci. U.S.A. 72:3359-3363(1975).
RN [8]
RP CALCIUM-BINDING DATA.
RX MEDLINE=84185716; PubMed=6546930;
RA Suo T., Bjoerk I., Holmgren A., Stenflo U.;
RT "Calcium-binding properties of bovine factor X lacking the gamma-
carboxyglutamic acid-containing region."
RL J. Biol. Chem. 259:5705-5710(1984).
RN [9]
RP SUPPATION.
RX MEDLINE=86140210; PubMed=3949800;
RA Morita T., Jackson C.M.;
RT "Localization of the structural difference between bovine blood
coagulation factors XI and X2 to tyrosine 18 in the activation
peptide."
RL J. Biol. Chem. 261:4008-4014(1986).
RN [10]
RP STRUCTURE BY NMR OF 85-126.
RX MEDLINE=91084483; PubMed=2261466;
RA Selander M., Persson E., Stenflo U., Drakenberg T.;
RT "1H NMR assignment and secondary structure of the Ca2(+)-free form of
the amino-terminal epidermal growth factor like domain in coagulation
factor X."
RL Biochemistry 29:8111-8118(1990).
RN [11]
RP STRUCTURE BY NMR OF 85-126.
RX MEDLINE=92329412; PubMed=1627540;
RA Ullner M., Selander M., Persson E., Stenflo U., Drakenberg T.,
RT "Three-dimensional structure of the apo form of the N-terminal
EGF-like module of blood coagulation factor X as determined by NMR
spectroscopy and simulated folding."
RL Biochemistry 31:5974-5983(1992).
RN [12]
RP STRUCTURE BY NMR OF 85-126.
RX MEDLINE=92406922; PubMed=1527084;
RA Selander-Sunnerhagen M., Ullner M., Persson E., Telemann O.,
RT "How an epidermal growth factor (EGF)-like domain binds calcium. High
resolution NMR structure of the calcium form of the NH2-terminal EGF-
like domain in coagulation factor X."
RL J. Biol. Chem. 267:19642-19649(1992).
RN [13]
RP STRUCTURE BY NMR OF 41-126.
RX MEDLINE=96387194; PubMed=8794734;
RA Sunnerhagen M., Olaf G.A., Stenflo U., Forsen S., Drakenberg T.,
RT "The relative orientation of Glu and Gln domains in coagulation
factor X is altered by Ca2+ binding to the first EGF domain. A
combined NMR-small angle X-ray scattering study."
RL Biochemistry 35:11547-11559(1996).
RN [14]
RP FUNCTION. Factor Xa is a vitamin K-dependent glycoprotein that
converts prothrombin to thrombin in the presence of factor Va,
calcium and phospholipid during blood clotting.
CC -1- CATALYTIC ACTIVITY: Preferential cleavage: Arg-Thr and then
Arg-Ile bonds in prothrombin to form thrombin.
CC SUBUNIT: The two chains are formed from a single-chain precursor
by the excision of two Arg residues and are held together by 1 or
more disulfide bonds.
CC -1- PTM: The vitamin K-dependent, enzymatic carboxylation of some
glutamate residues allows the modified protein to bind calcium.
CC -1- PTM: N- and O-glycosylated.
CC -1- PTM: THE ACTIVATION PEPTIDE IS CLEAVED BY FACTOR IXA (IN THE
INTRINSIC PATHWAY), OR BY FACTOR VIIA (IN THE EXTRINSIC PATHWAY).
CC -1- MISCELLANEOUS: Calcium also binds, with stronger affinity to
another site, beyond the Glu domain.
CC -1- SIMILARITY: Belongs to peptidase family S1.
CC -1- SIMILARITY: Contains 2 EGF-like domains.
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CC regulates blood coagulation by inactivating factors Va and VIII
CC in the presence of calcium ions and phospholipids.
CC -1- CATALYTIC ACTIVITY: Degradation of blood coagulation factors Va
CC and VIII.
CC -1- TISSUE SPECIFICITY: Plasma; synthesized in the liver.
CC -1- SIMILARITY: Belongs to peptidase family S1.

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CC at the European Bioinformatics Institute. There are no restrictions on its
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CC or send an email to license@isb-sib.ch).

CC EMBL: DA3754; BAA07811.1. -.
CC HSSP: P04070; 1PCU.
CC MEROPS: S01.218; -.
CC InterPro: IPR009003; Cys_Ser_trypsin.
CC InterPro: IPR001254; Peptidase_S1.
CC InterPro: IPR001314; Peptidase_S1A.
CC Pfam: PF00089; trypsin; 1.
CC PRINTS: PR00722; CHYMOTRYPSIN.
CC SMART: SM00020; TRY_SPC; 1.
CC DR PROSITE: PS00240; TRYPSIN_DOM; 1.
CC DR PROSITE: PS00134; TRYPSIN_HIS; PARTIAL.
CC DR PROSITE: PS00135; TRYPSIN_SER; 1.
CC Blood coagulation; Glycoprotein; Serine protease; Hydrolyase.
FT NON TER 1 1
FT ACT SITE 26 26 CHARGE RELAY SYSTEM.
FT ACT SITE 129 129 CHARGE RELAY SYSTEM.
FT DISULFID 100 114 BY SIMILARITY.
FT DISULFID 125 153 BY SIMILARITY.
FT CARBOHYD 17 17 N-LINKED (GLCNAC. . .) (POTENTIAL).
FT CARBOHYD 82 82 N-LINKED (GLCNAC. . .) (POTENTIAL).
FT NON TER 161 161
SQ SEQUENCE 161 AA; 17770 MW; 27D78F185B2FCC69 CRC64;

Query Match 35.3%; Score 835; DB 1; Length 161;
Best Local Similarity 95.7%; Pred. No. 5,6e-59;
Matches 154; Conservative 4; Mismatches 3; Indels 0; Gaps 0

Qy 232 EKHELDIDIKVFNPHNYSKSTND;ALAHAPATLSOTIYIC;PDSGLAEHLENOA 291
Db 1 EKHELDIDIEVFNHNYKSTTND;IALRLAOPATLSOTIYIC;PDSGLAEHLENOA 60
Db 61 GQETLVTGNGHSSREKEAKRRNFPIINFKIPVYENHECEVMSNMVSEKRLCAGLGD 351
Qy 292 GQETLVTGNGHSSREKEAKRRNFPIINFKIPVYENHECEVMSNMVSEKRLCAGLGD 351
Db 61 GQETLVTGNGHSSREKEAKRRNFPIINFKIPVYENHECEVMSNMVSEKRLCAGLGD 120
Qy 352 RODACGDSGGPMVAFPHGATFWLGVMSGCGGLHNYGV 392
Db 121 RODACGDSGGPMVAFPHGATFWLGVMSGCGGLHNYGV 161

RESULT 8
PAID RABBIT
AC 019045; STANDARD; PRT; 490 AA.
DT 15-DEC-1998 (Rel. 37, Created)
DT 15-DEC-1998 (Rel. 37, Last sequence update)
DT 10-OCT-2003 (Rel. 42, Last annotation update)
DE Coagulation factor X precursor (EC 3.4.21.6) (Stuart factor).
GN P10
OS Oryctolagus cuniculus (Rabbit).
OC Bkaryocota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Lagomorpha; Leporidae; Oryctolagus.
NCBI TaxID=9986;
RN [1] -
RP SEQUENCE FROM N.A.
RX MEDLINE=97256311; PubMed=9101642;
RT Penhurchi U.R.; Anderson K.D.; James H.L.;
RT "Characterization of a full-length cDNA for rabbit factor X.";

QY 299 GWCYHSREKAKNETFVNLFIKIPVPHNECSYMSNMVSENNLCAGILGRODACEG 358
 DB 341 GWCYSDKYNKGRNRNFIITFIRPLAARDCMQNMNVSENNLCAGILGTDACDG 400
 QY 359 DSGGPMVAFHGTWFLVGLVSWGEGCLLHNYGYTKSRFLDMTHHIDKAPKX 416
 DB 401 DSGGPMVAFHGTWFLVGLVSWGEGCLLHNYGYTKSRFLDMTHHIDKAPKX 458
 RESULT 6
 ID PRTC MOUSE STANDARD; PRT; 461 AA.
 AC P33587.035498;
 DT 01-FEB-1994 (Rel. 28. Created)
 DT 01-FEB-1994 (Rel. 28. Last sequence update)
 DT 10-OCT-2003 (Rel. 42. Last annotation update)
 DE Vitamin-K-dependent protein C precursor (EC 3.4.21.69)
 DE (Autoproteolysin IIA) (Anticoagulant protein C) (Blood coagulation factor XIV).
 DE PROC.
 OS Mus musculus (Mouse).
 OC Eukaryota; Metazoa; Chordata; Vertebrata; Euteleostomi;
 OC Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
 OC NCBI_TaxID=10090;
 RN [1]
 RP SEQUENCE FROM N.A.
 RC TISSUE=Liver;
 RA MEDLINE=9231897; PubMed=161873;
 RA Tada N., Sato M., Tsujimura A., Iwase R., Hashimoto-Gotoh T.;
 RT "Isolation and characterization of a mouse protein C cDNA."
 RL J. Biochem. 111:491-495(1992).
 RN [2]
 RP SEQUENCE FROM N.A.
 RC STRAIN=129/SvJ;
 RX MEDLINE=96152576; PubMed=9493582;
 RA Jalbert L.R., Rosen E.D., Lissens A., Carmeliet P., Collen D.,
 RA Castellino F.J.;
 RT "Nucleotide structure and characterization of the murine gene encoding
 RT anticoagulant protein C."
 RL Thromb. Haemost. 79:310-316(1998).
 RN [3]
 RP SEQUENCE OF 274-434 FROM N.A.
 RC STRAIN=BALB/c;
 RX MEDLINE=94318474; PubMed=8043441;
 RA Murakawa M., Okamura T., Kamura T., Kuroiwa M., Harada M., Niho Y.;
 RT "A comparative study of partial primary structures of the catalytic
 RT region of mammalian protein C."
 RL Br. J. Haematol. 86:590-600(1994).
 CC -1- FUNCTION: Protein C is a vitamin K-dependent serine protease that
 CC regulates blood coagulation by inactivating factors Va and VIII
 CC in the presence of calcium ions and phospholipids.
 CC -1- CATALYTIC ACTIVITY: Degradation of blood coagulation factors Va
 CC and VIII.
 CC -1- SUBUNIT: Synthesized as a single chain precursor, which is cleaved
 CC into a light chain and a heavy chain held together by a disulfide
 CC bond. The enzyme is then activated by thrombin, which cleaves a
 CC tetradecapeptide from the amino end of the heavy chain; this
 CC reaction, which occurs at the surface of endothelial cells, is
 CC strongly promoted by thrombomodulin.
 CC -1- TISSUE SPECIFICITY: Plasma; synthesized in the liver.
 CC -1- PTM: The vitamin K-dependent, enzymatic carboxylation of some Glu
 CC residues allows the modified protein to bind calcium.
 CC -1- MISCELLANEOUS: Calcium also binds, with stronger affinity to
 CC another site, beyond the Gla domain. This Gla-independent binding
 CC site is necessary for the recognition of the thrombin-
 CC thrombomodulin complex.
 CC -1- SIMILARITY: Belongs to peptidase family S1.
 CC -1- SIMILARITY: Contains 2 EGF-like domains.
 CC This SWISS-PROT entry is copyright. It is produced through a collaboration
 CC between the Swiss Institute of Bioinformatics and the EMBL outstation -
 CC the European Bioinformatics Institute. There are no restrictions on its

CC use by non-profit institutions as long as its content is in no way
 CC modified and this statement is not removed. Usage by and for commercial
 CC entities requires a license agreement (see <http://www.isb-sib.ch/announce/>
 CC or send an email to license@isb-sib.ch).
 CC
 DR EMBL: D10445; BAA01235.1; -.
 DR EMBL: AF034569; AAC33795.1; -.
 DR EMBL: D43755; BAA07812.1; -.
 DR PIR: UX0210; UX0210.
 DR HSP: P04070; 1PCU.
 DR MEROPS: S01.218; -.
 DR MGD: MGI:97771; Proc.
 DR InterPro: IPR000152; Asx_hydroxyl_S.
 DR InterPro: IPR009003; Cys_ser_trypsin.
 DR InterPro: IPR001881; EGF_Ca.
 DR InterPro: IPR006203; EGF-like.
 DR InterPro: IPR002383; GLA_blood.
 DR InterPro: IPR001254; Peptidase_S1.
 DR InterPro: IPR001314; Peptidase_S1A.
 DR InterPro: IPR000294; Vitk_dep_Gla.
 DR Pfam: PF00008; EGF_2.
 DR Pfam: PF00594; gla; 1.
 DR Pfam: PF00089; trypsin; 1.
 DR PRINTS: PR00722; CHYMOTRYPSIN.
 DR PRINTS: PR00001; GLABLOOD.
 DR SMART: SM00179; EGF_CA; 1.
 DR SMART: SM00069; GLA; 1.
 DR SMART: SM00020; TRYP_Spec; 1.
 DR PROSITE: PS00010; ASX_HYDROXYL; 1.
 DR PROSITE: PS00022; EGF_1; 1.
 DR PROSITE: PS01186; EGF_2; 2.
 DR PROSITE: PS00025; EGF_3; 1.
 DR PROSITE: PS01187; EGF_CA; 1.
 DR PROSITE: PS00011; GLU_CARBOXYLATION; 1.
 DR PROSITE: PS00240; TRYPSIN_DOM; 1.
 DR PROSITE: PS00134; TRYPSIN_HIS; 1.
 DR PROSITE: PS00135; TRYPSIN_SER; 1.
 KM Blood coagulation; Glycoprotein; Serine protease;
 KM Gamma-carboxyglutamic acid; Calcium-binding; Vitamin K; Hydroxylation;
 KM EGF-like domain; Repeat; Endothelial cell; Hydrolase; Signal.
 FT SIGNAL 1 33
 FT PROPEP 34 41
 FT CHAIN 42 196
 FT CHAIN 199 461
 FT PEPTIDE 199 212
 FT SITE 212 213
 FT DOMAIN 96 131
 FT DOMAIN 135 175
 FT DOMAIN 213 461
 FT MOD_RES 47 47
 FT MOD_RES 48 48
 FT MOD_RES 55 55
 FT MOD_RES 57 57
 FT MOD_RES 60 60
 FT MOD_RES 61 61
 FT MOD_RES 66 66
 FT MOD_RES 67 67
 FT MOD_RES 70 70
 FT MOD_RES 112 112
 FT ACT_SITE 253 253
 FT ACT_SITE 299 299
 FT ACT_SITE 402 402
 FT DISULFID 88 63
 FT DISULFID 91 110
 FT DISULFID 91 110

DE (Anticoagulant protein C) (Blood coagulation factor XIV).

OC Rattus norvegicus (Rat).

OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Rattus.

OC NCBI TaxId=10116;

RM [1]

RP SEQUENCE FROM N.A.

RC STRAIN=Mistar; TISSUE=Liver;

RX MEDLINE=9239550; PubMed=167650;

RA Okafor T., Maekawa K., Nawa K., Marumoto Y.;

RL "The cDNA cloning and mRNA expression of rat protein C.,"

CC Blochim. Biophys. Acta 1131:329-332(1992).

CC -1- FUNCTION: Protein C is a vitamin K-dependent serine protease that regulates blood coagulation by inactivating factors Va and VIIIa in the presence of calcium ions and phospholipids.

CC -1- CATALYTIC ACTIVITY: Degradation of blood coagulation factors Va and VIIIa.

CC -1- SUBUNIT: Synthesized as a single chain precursor, which is cleaved into a light chain and a heavy chain held together by a disulfide bond. The enzyme is then activated by thrombin, which cleaves a tetradecapeptide from the amino end of the heavy chain; this reaction, which occurs at the surface of endothelial cells, is strongly promoted by thrombomodulin.

CC -1- TISSUE SPECIFICITY: Plasma; synthesized in the liver.

CC -1- PTM: The vitamin K-dependent, enzymatic carboxylation of some Glu residues allows the modified protein to bind calcium.

CC -1- MISCELLANEOUS: Calcium also binds, with stronger affinity to another site, beyond the Gla domain. This Gla-independent binding site is necessary for the recognition of the thrombin-thrombomodulin complex.

CC -1- SIMILARITY: Belongs to the recognition of the thrombin-thrombomodulin complex.

CC -1- SIMILARITY: Contains 2 EGF-like domains.

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CC -----

CC EMBL; X64336; CAA45617.1; -.

CC PIR; S18994; S18994.

CC HSSP; P04070; 1PCU.

CC MEROPS: S01.218; -.

DR InterPro: IPR000152; Asx_hydroxyl_S.

DR InterPro: IPR009003; Cys_Ser_trypsin.

DR InterPro: IPR001881; EGF_Ca.

DR InterPro: IPR006209; EGF_like.

DR InterPro: IPR002383; Gla_blood.

DR InterPro: IPR001314; Peptidase_S1A.

DR InterPro: IPR00294; VitK_dep_Gla.

DR Pfam; PF00008; EGF_2.

DR Pfam; PF00594; Gla; 1.

DR Pfam; PF00089; trypsin; 1.

DR PRINTS; PR00722; CHYMOTRYPSIN.

DR PRINTS; PR00001; GLABLOOD.

DR SMART; SM00179; BGF_CA; 1.

DR SMART; SM00069; Gla; 1.

DR SMART; SM00020; Tryp_Spc; 1.

DR PROSITE; PS00010; ASX_HYDROXYL; 1.

DR PROSITE; PS00022; EGF_1; 1.

DR PROSITE; PS01186; EGF_2; 2.

DR PROSITE; PS0026; EGF_3; 1.

DR PROSITE; PS0187; EGF_CA; 1.

DR PROSITE; PS00011; GLU_CARBOXYLATION; 1.

DR PROSITE; PS0240; TRYPSIN_DOM; 1.

DR PROSITE; PS00134; TRYPSIN_HIS; 1.

DR PROSITE; PS00135; TRYPSIN_SER; 1.

KW Blood coagulation, Glycoprotein, Serine protease.

KW Gamma-carboxyglutamic acid; Calcium-binding; Vitamin K; Hydroxylation; EGF-like domain; Repeat; Endothelial cell; Hydrolyase; Signal.

KW EGF-like domain; Repeat; Endothelial cell; Hydrolyase; Signal.

FT SIGNAL 1 32

FT PROPEP 33 41

FT CHAIN 42 196

FT CHAIN 199 461

FT PEPTIDE 199 212

FT SITE 212 213

FT DOMAIN 96 131

FT DOMAIN 135 175

FT DOMAIN 213 461

FT MOD_RES 47 47

FT MOD_RES 48 48

FT MOD_RES 55 55

FT MOD_RES 57 57

FT MOD_RES 60 60

FT MOD_RES 61 61

FT MOD_RES 66 66

FT MOD_RES 67 67

FT MOD_RES 70 70

FT MOD_RES 112 112

FT ACT_SITE 254 254

FT ACT_SITE 300 300

FT ACT_SITE 402 402

FT DISULFID 58 63

FT DISULFID 91 110

FT DISULFID 100 105

FT DISULFID 104 119

FT DISULFID 121 130

FT DISULFID 139 150

FT DISULFID 146 159

FT DISULFID 161 174

FT DISULFID 182 320

FT DISULFID 239 255

FT DISULFID 373 387

FT DISULFID 398 426

FT CARBOHYD 215 215

FT CARBOHYD 291 291

FT CARBOHYD 355 355

SEQ SEQUENCE 461 AA; 51912 MW; 8A4CF9364EDACD5 CRC64;

Query Match 71.2%; Score 1654.5; DB 1; Length 461;

Best Local Similarity 69.4%; Pred. No. 4,9e-123;

Matches 290; Conservative 56; Mismatches 69; Indels 3; Gaps 2;

1 ANSTLEKHSLEBCEICPEEAKETIPONDPTLAWSHVNDGQCVLLEHPCA 60

42 ANSTLEKHSLEBCEICPEEAKETIPONDPTLAWSHVNDGQCVLLEHPCA 101

61 SLCCGHTCIDIGSFCDGSGMEGRFCQREVSFLNCSLDNGCTTHYCLEEVGMRRCSC 120

102 SPCGHGTICIDLGJGFSQCDKMGEGRFQCGMEGFQPCRVKNGCYHCEBTRGRRC 161

121 APYKGLDGLLOCHNAVYFCGKPMKMKRSHK--DTEQDEQVDPPLIGKMKTR 178

162 APYGLADHMKCRPTVFPCKLMKRTKKRKFEDIDPEDEBELGSPITVNGTLKQ 221

179 GDSPMQVLLDSKKLLACGAVLTPSPVLTAAHGMDSKKLLVRLGEYDLRRWEKMLDI 238

222 GDSPMQVLLDSKKLLACGAVLTPSPVLTAAHGMDSKKLLVRLGEYDLRRWEKMLDI 281

239 DIKEVFAHNPYSKSTNDIALHLAQPATLSQTIVPICPDGSLARELNDAQOETLV 298

282 DIKEVFAHNPYSKSTNDIALHLAQPATLSQTIVPICPDGSLARELNDAQOETLV 340

CC -1- SUBUNIT: Synthesized as a single chain precursor, which is cleaved into a light chain and a heavy chain held together by a disulfide bond. The enzyme is then activated by thrombin, which cleaves a tetradecapeptide from the amino end of the heavy chain; this reaction, which occurs at the surface of endothelial cells, is strongly promoted by thrombomodulin.

CC -1- TISSUE SPECIFICITY: Plasma; synthesized in the liver.

CC -1- PTM: The vitamin K-dependent, enzymatic carboxylation of some Glu residues allows the modified protein to bind calcium.

CC -1- MISCELLANEOUS: Calcium also binds, with stronger affinity to another site, beyond the Gla domain. This Gla-independent binding site is necessary for the recognition of the thrombin-thrombomodulin complex.

CC -1- SIMILARITY: Belongs to peptidase family S1.

CC -1- SIMILARITY: Contains 2 EGF-like domains.

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CC EMBL: K02435; AAA0685.1; -.

DR PIR: A26250; KXBO.

DR HSP: P04070, 1PCU.

DR MEROPS: S01.219; -.

DR InterPro: IPR001152; Aex_hydroxyl_S.

DR InterPro: IPR009003; Cys_Ser_trypsin.

DR InterPro: IPR001881; EGF_Ca.

DR InterPro: IPR006209; EGF_1ike.

DR InterPro: IPR002383; Gla_blood.

DR InterPro: IPR006210; IBGF.

DR InterPro: IPR001254; Peptidase_S1.

DR InterPro: IPR001314; Peptidase_S1A.

DR InterPro: IPR000294; Vitk_dep_Gla.

DR Pfam: PF00008; EGF_2.

DR Pfam: PF00594; Gla_1.

DR Pfam: PF00089; trypsin; 1.

DR PRINTS: PR00722; CHNOTRYPsin.

DR PRINTS: PR00001; GLABLOOD.

DR SMART: SM00181; EGF; 2.

DR SMART: SM00069; Gla; 1.

DR SMART: SM00020; tryp_Spc; 1.

DR PROSITE: PS00010; ASX_HYDROXYL; 1.

DR PROSITE: PS00022; EGF_1; 1.

DR PROSITE: PS01186; EGF_2; 2.

DR PROSITE: PS50026; EGF_3; 1.

DR PROSITE: PS01187; EGF_Ca; 1.

DR PROSITE: PS00011; GLU CARBOXYLATION; 1.

DR PROSITE: PS50040; TRYPSIN_DOM; 1.

DR PROSITE: PS00134; TRYPSIN_HTS; FALSE_NEG.

DR PROSITE: PS00135; TRYPSIN_SER; 1.

DR Blood coagulation; Glycoprotein; Serine protease; Gamma-carboxyglutamic acid; Calcium-binding; Vitamin K; Hydroxylation; KX

KX EGF-like domain; Repeat; Endothelial cell; Hydrolyase; Signal.

FT MOD_TER 1 1

FT SIGNAL <1 29

FT PROPEP 30 39

FT CHAIN 40 194

FT CHAIN 197 456

FT PEPTIDE 197 210

FT OOKAIN 94 129

FT DOMAIN 133 173

FT DOMAIN 211 456

FT MOD_RES 45 45

FT MOD_RES 46 46

FT MOD_RES 53 53

FT MOD_RES 55 55

FT MOD_RES 58 58

FT MOD_RES 59 59

FT MOD_RES 62 62

FT GAMMA-CARBOXYGLUTAMIC ACID.

FT MOD_RES 64 64

FT MOD_RES 65 65

FT MOD_RES 68 68

FT MOD_RES 74 74

FT MOD_RES 110 110

FT ACT_SITE 252 252

FT ACT_SITE 298 298

FT ACT_SITE 397 397

FT DISULFID 56 61

FT DISULFID 89 108

FT DISULFID 98 103

FT DISULFID 102 117

FT DISULFID 119 128

FT DISULFID 137 148

FT DISULFID 144 157

FT DISULFID 159 172

FT DISULFID 180 318

FT DISULFID 237 253

FT DISULFID 368 382

FT DISULFID 393 421

FT CARBOHYD 136 136

FT CARBOHYD 289 289

FT CARBOHYD 350 350

FT CARBOHYD 366 366

FT CARBOHYD 82 82

FT CONFLICT 455 456

FT SEQUENCE 456 AA; 51407 MW; CAPE833F894C209 CRG64;

Query Match 71.8%; Score 1668; DB 1; Length 456;

Best Local Similarity 71.3%; Pred. No. 4.2e-12;

Matches 300; Conservative 39; Mismatches 76; Indels 6; Gaps 2;

QY 1 ANSFLIELRLHSLEPCIEICDEFEAKLFONVDITLAFSKHVDQCVLPLEHPCA 60

DB 40 ANSFLIELRLHGVNERECSEVEFEARELFONTDYAFWSFGDQCEDRPSGSPCD 99

QY 61 SLCCGHGICIDIGSGSCCGRSGWEGFRCREVSFANGLNIGCTHYCLEEYGRRCSC 120

DB 100 LPOCRGRKCIDIGSGRCDCHGEHGFCLHFRFSNGSANGGCAHYCMEHGRHSC 159

QY 121 AFGVTLGDDLLQCHPAVKEPCGRPMKMEKRRSHKRDTE--DOEDCVDRLLDGMTRR 178

DB 160 AFGVTLGDDLLQCHPAVKEPCGRPMKMEKRRSHKRDTE--DOEDCVDRLLDGMTRR 219

QY 173 GSPWQVYLLDSKKIACAVLHPSVTLPAACHDESKKLVLAGYOLRMEKKEIDL 238

DB 220 GSPWQVYLLDSKKIACAVLHPSVTLPAACHDESKKLVLAGYOLRMEKKEIDL 279

QY 239 DIKEVFAHPNTSKSTNDIALHLAOPATLSQTVPLICLPDSGLARELNOAGQETLV 298

DB 280 DIKEVTHPNTSTSONDIALRLAPATLSQTVPLICLPDSGLARELNOAGQETLV 339

QY 299 GWCYSSSEKAKRNRTVAFIKIPVPPNECSYVMSNMVSENNLQAGILSGRODACEG 358

DB 340 GWCYSSSEKAKRNRTVAFIKIPVPPNECSYVMSNMVSENNLQAGILSGRODACEG 395

QY 359 DSGGPMASFGHMPFLVGVSGSGCGLLHNGVTKYSRYLDTWHSHIRDEKAPOKSWA 418

DB 396 DSGGPMASFGHMPFLVGVSGSGCGLLHNGVTKYSRYLDTWHSHIRDEKAPOKSWA 455

QY 419 P 419

DB 456 P 456

RESULT 5

PRTG RAT STANDARD; PRT; 461 AA.

AC P31354;

DT 01-JUL-1993 (Rel. 26, Created)

DT 01-JUL-1993 (Rel. 26, Last sequence update)

DT 10-OCT-2003 (Rel. 42, Last annotation update)

DE Vitamin-K-dependent protein C precursor (BC 3.4.21.69)

FT	CHAIN	199	459	SIMILARITY).	PROTEIN C HEAVY CHAIN (BY
FT				SIMILARITY).	
FT	PEPTIDE	199	213	ACTIVATION PEPTIDE (BY SIMILARITY).	
FT	SITE	213	214	CLEAVAGE (BY THROMBIN) (BY	
FT				SIMILARITY).	
FT	DOMAIN	96	131	BGF-LIKE 1.	
FT	DOMAIN	135	175	BGF-LIKE 2.	
FT	DOMAIN	214	459	SERINE PROTEASE.	
FT	MOD_RES	47	47	GAMMA-CARBOXYGLUTAMIC ACID (BY	
FT				SIMILARITY).	
FT	MOD_RES	48	48	GAMMA-CARBOXYGLUTAMIC ACID (BY	
FT				SIMILARITY).	
FT	MOD_RES	55	55	GAMMA-CARBOXYGLUTAMIC ACID (BY	
FT				SIMILARITY).	
FT	MOD_RES	57	57	GAMMA-CARBOXYGLUTAMIC ACID (BY	
FT				SIMILARITY).	
FT	MOD_RES	60	60	GAMMA-CARBOXYGLUTAMIC ACID (BY	
FT				SIMILARITY).	
FT	MOD_RES	61	61	GAMMA-CARBOXYGLUTAMIC ACID (BY	
FT				SIMILARITY).	
FT	MOD_RES	66	66	GAMMA-CARBOXYGLUTAMIC ACID (BY	
FT				SIMILARITY).	
FT	MOD_RES	67	67	GAMMA-CARBOXYGLUTAMIC ACID (BY	
FT				SIMILARITY).	
FT	MOD_RES	70	70	GAMMA-CARBOXYGLUTAMIC ACID (BY	
FT				SIMILARITY).	
FT	MOD_RES	112	112	HYDROXYLATION (BY SIMILARITY).	
FT	ACT_SITE	255	255	CHARGE RELAY SYSTEM.	
FT	ACT_SITE	301	301	CHARGE RELAY SYSTEM.	
FT	ACT_SITE	400	400	CHARGE RELAY SYSTEM.	
FT				SIMILARITY.	
FT	DISULFID	58	63	BY SIMILARITY.	
FT				SIMILARITY.	
FT	DISULFID	91	110	BY SIMILARITY.	
FT				SIMILARITY.	
FT	DISULFID	100	105	BY SIMILARITY.	
FT				SIMILARITY.	
FT	DISULFID	104	119	BY SIMILARITY.	
FT				SIMILARITY.	
FT	DISULFID	121	130	BY SIMILARITY.	
FT				SIMILARITY.	
FT	DISULFID	139	150	BY SIMILARITY.	
FT				SIMILARITY.	
FT	DISULFID	146	159	BY SIMILARITY.	
FT				SIMILARITY.	
FT	DISULFID	161	174	INTERCHAIN (BY SIMILARITY).	
FT				SIMILARITY.	
FT	DISULFID	182	321	BY SIMILARITY.	
FT				SIMILARITY.	
FT	DISULFID	240	256	BY SIMILARITY.	
FT				SIMILARITY.	
FT	DISULFID	371	385	BY SIMILARITY.	
FT				SIMILARITY.	
FT	CARBOHYD	138	138	N-LINKED (GLCNAC. . .)	(POTENTIAL).
FT	CARBOHYD	292	292	N-LINKED (GLCNAC. . .)	(POTENTIAL).
FT	CARBOHYD	353	353	N-LINKED (GLCNAC. . .)	(POTENTIAL).
FT				N-LINKED (GLCNAC. . .)	(POTENTIAL).
FT	SEQUENCE	459 AA;	51866 MM;	8541AA14CC16D9	CRC64;

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Query Match      75.6%; Score 1756.5; DB 1; Length 459;
Best Local Similarity 75.1%; Prod. No. 4.5e-131;
Matches 317; Conservative 61; Indels 7; Gaps 2

Qy      1 ANSFLELRHSSITERECIEELCDFBRAKEIFONVDVTLAFWSKXHDQCLVLPLEPRCA 60
Db      42 ANSFLELRHSSITERECIEELCDFBRAEIIQNTENTYMAFWSKXHDQCLAVSPREHLC 101
      ::::::::::::::::::::::::::::

Qy      61 SFCGGHGTCDIGTGSFSCDCRSGBGGRFCQREVSFANGLDNGCTHCLAEVGRRCSC 120
Db      102 SFCGGHGTCDIGTGFRCDCQAGWGRFCLEHVFANSCSTBNQCAHYCLIEEGRRCAC 161
      ::::::::::::::::::::::::::::::

Qy      121 AFGYKLGDDVLLQCHAVYVFCGRPMKREKRSMLRDED----QEHVDPELIDGMTR 177
Db      162 AFGYKLGDDVLLQCEPRVYVSPCGRLGNREKRNKMLRDTDYDDKKEQIDPELVNGKSP 221
      ::::::::::::::::::::::::::::::

Qy      178 RCDSPQOVVLLDSKKLLACGAVLHPSWLTPRAHCWDSKLLVRLGEYDLEARKWELD 237
Db      222 WQESPQOVVLLDSKKLLACGAVLIHVSWLTPRAHCDDYKLLVRLGEYDLRRRKWEVD 281
      ::::::::::::::::::::::::::::::

Qy      238 LDIKEVFAHNVSKSTFTNDIALIHLAOPATLSQITVPCLPDSGLAEKRLNQAQOETLV 297
Db      282 LDIKEVFAHNVYTRSTNDIALILRLAEPATFSQITVPCLPDSGLSEKRLTRVQOETLV 341
      ::::::::::::::::::::::::::::::

Qy      298 TGMGYHSSRKEKRNRTFVNLFIKIPVFNHECSEVMNMSNMKCAQLIGDQDCE 357

```

Db 342 TWGQYS ---- EATKRSSTLNFIVKVPAPPHNRCVQAMNNKISNNMLCGILLGDSRDACE 397

Gy 358 GDSGCEPMVASPEGTWELVGVINSKGGCCGLLHNTGVYTKSKRYLDTWIGHIRDXKAPQKSM 417

Db 398 GDSGCEPMVASPEGTWELVGVINSKGGCCGLRHNTGVYTKSKRYLDTWIGHIRDXKAPQKSM 457

Gy 418 AP 419

Db 458 VP 459

RESULT 4

PRTC_BOVIN

ID	PRTC_BOVIN	STANDARD:	PRT:	456 AA.
AC	P00745,			
DT	21-JUL-1986 (Rel. 01, Created)			
DT	13-AUG-1987 (Rel. 05, Last sequence update)			
DT	10-OCT-2003 (Rel. 42, Last annotation update)			
DE	Vitamin-K-dependent protein C precursor (EC 3.4.21.69)			
DE	Antithrombin IIIA (Anticoagulant protein C) (Blood coagulation factor XIV) (Fragment).			
GN	PROC.			
OS	Bos taurus (bovine).			
OC	Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;			
OC	Mammalia; Euteria; Cetartiodactyla; Ruminantia; Pecora; Bovidae;			
OC	Bovidae; Bovinae; Bos.			
OX	NCBI_TaxID=9913;			
RN	[1]			
RX	SEQUENCE FROM N.A.			
RX	MEDLINE=85014826; PubMed=6091100.			
RA	Long G.L., Balasaga R.M., McGillivray R.T.A.;			
RT	Cloning and sequencing of liver cDNA coding for bovine protein C.;			
RT	Proc. Natl. Acad. Sci. U.S.A. 81:5653-5656(1984).			
RN	[2]			
RP	SEQUENCE OF 40-194, AND CARBOHYDRATE-LINKAGE SITE ASN-136.			
RX	MEDLINE=83007325; PubMed=6896876;			
RA	Fernlund P., Stenflo U.;			
RT	"Amino acid sequence of the light chain of bovine protein C.;"			
RT	J. Biol. Chem. 257:12170-12179(1982).			
RN	[3]			
RP	REVISION TO 110.			
RX	MEDLINE=83169769; PubMed=6572939;			
RA	Drakenberg T., Fernlund P., Koepferoff P., Stenflo U.;			
RT	"Dea-Hydroxyaspartic acid in vitamin K-dependent protein C.;"			
RT	Proc. Natl. Acad. Sci. U.S.A. 80:1802-1806(1983).			
RN	[4]			
RP	SEQUENCE OF 197-456, AND CARBOHYDRATE-LINKAGE SITES ASN-289; ASN-350			
RP	AND ASN-366.			
RX	MEDLINE=83007326; PubMed=6896877;			
RA	Stenflo U., Fernlund P.;			
RT	"Amino acid sequence of the heavy chain of bovine protein C.;"			
RT	J. Biol. Chem. 257:12180-12190(1982).			
RN	[5]			
RP	PROCESSING, AND CALCIUM-BINDING DATA.			
RX	MEDLINE=83213513; PubMed=6304092;			
RA	Esmon N.L., Debault L.E., Esmon C.T.;			
RT	"Proteolytic formation and properties of gamma-carboxyglutamic acid-			
RT	domainless protein C.;"			
RT	J. Biol. Chem. 258:5548-5553(1983).			
RN	[6]			
RP	PROCESSING, AND CALCIUM-BINDING DATA.			
RX	MEDLINE=83213514; PubMed=6406503;			
RA	Johnson A.E., Esmon N.L., Lane T.M., Esmon C.T.;			
RT	"Structural changes required for activation of protein C are induced			
RT	by Ca ²⁺ binding to a high affinity site that does not contain gamma-			
RT	carboxyglutamic acid.;"			
RT	J. Biol. Chem. 258:5554-5560(1983).			
CC	-I- FUNCTION: Protein C is a vitamin K-dependent serine protease that			
CC	regulates blood coagulation by inactivating factors Va and VIIa			
CC	in the presence of calcium ions and phospholipids.			
CC	-I- CATALYTIC ACTIVITY: Degradation of blood coagulation factors Va			
CC	and VIIa.			

FT	ACT_SIZE	296	296	CHARGE RELAY SYSTEM.
FT	ACT_SITE	399	399	CHARGE RELAY SYSTEM.
FT	DISULFID	53	58	BY SIMILARITY.
FT	DISULFID	86	105	BY SIMILARITY.
FT	DISULFID	95	100	BY SIMILARITY.
FT	DISULFID	99	114	BY SIMILARITY.
FT	DISULFID	116	125	BY SIMILARITY.
FT	DISULFID	134	145	BY SIMILARITY.
FT	DISULFID	141	154	BY SIMILARITY.
FT	DISULFID	156	169	BY SIMILARITY.
FT	DISULFID	177	316	INTERCHAIN (BY SIMILARITY).
FT	DISULFID	177	316	BY SIMILARITY.
FT	DISULFID	235	251	BY SIMILARITY.
FT	DISULFID	370	384	BY SIMILARITY.
FT	DISULFID	395	423	BY SIMILARITY.
FT	CARBOHYD	133	133	N-LINKED (GLCNAC. . .) (POTENTIAL).
FT	CARBOHYD	287	287	N-LINKED (GLCNAC. . .) (POTENTIAL).
FT	CARBOHYD	352	352	N-LINKED (GLCNAC. . .) (POTENTIAL).
SO	SEQUENCE	458 AA;	51087 MW;	D7A5F990C6F2D07 C6C64;
Query Match				
Best Local Similarity		81.0%; Score 1882.5; DB 1; Length 458;		
Matches 339; Conservative		80.3%; Pred. No. 5.3e-141;		
		33; Mismatches 47; Indels 3; Gaps 2;		

Qy	1	ANSLFELAHSHSLRECECEICEDFEAEKEIFONVNDPLAFMSKHYGDQCLVLPLEPCA	60
Dd	37	ANSLFELKPSLSRECEVECDLEBAKEITQSVDLTAFMYKIVYDGDCCALPSERPCS	96
Qy	61	SLCCGHGTCIDIGSPSCDGRSGWBGRECOREWSPLNCSLNGGCTHYCLEEVMRRCS	120
Dd	97	SOCCGHOTCADSIGSPSCQCHGGWEGSPCOEYERFNSCVNNGCAHYCLEEAGRS	156
Qy	121	APRYKLGDDLQCPNAKPEQCR-PKYMEEKSHLKQTE--DQEDVDPEPLIDGMTR	177
Dd	157	APGELADHDLQCEPAVAFPGRLGKIKIEKRANVKRLQEVEMEDYDPEPLIDGKLTR	216
Qy	178	RQDSBQWVVLTLSSKKKALACGAVLIHPMSVTLPAHCDSESKLTVRLGEYDLRRMEKELD	237
Dd	217	RQDSBQWVVLTLSSKKKALCGAVLIHMSVTLPAHCEPEKFLFRLGEYDLRRKRMELD	276
Qy	238	LDIKEVEVHPNYSKSTITNDIALIHLAOPATLSQITVPLCPDSGLAEREINQACQETLV	297
Dd	277	LIHICGVLIHPNYSRSTINDIALIRIQAQATLSQITVPLCPDNGNLEHRLMQACQEVV	336
Qy	298	TMWGHSSRKEKAKKRRFFVNLFIKIPVPEHNESEBMSNMVSENLCAQILGDSQADCE	357
Dd	337	TMWGHSSRKEKAKKRRFFILNFIYPAPOCEQVMSNIISBNMLCAQILGDSRRDCD	396
Qy	358	GPSGPMWVASFHSTNPLVLGLVSWGEGCGLLHNGVYIKTSRYLWIMHGIIRDEKAPQKSW	417
Dd	397	GPSGPMWVASFRGTWLVGLVSWGEGCGLLHNGVYIKTSRYLWIMHSHIEREKAPEPSP	456
Qy	418	AP 419	
Dd	457	AP 458	
RESULT 3			
AC	PRIC	PIC	
ID	PRIC	PIC	
AC	09GLP2;	STANDARD;	PRT; 459 AA.
DT	16-OCT-2001 (Rel. 40, Created)		
DT	16-OCT-2001 (Rel. 40, Last sequence update)		
DT	28-FEB-2003 (Rel. 41, Last annotation update)		
DE	Vitamin-K-dependent protein C precursor (EC 3.4.21.69)		
DE	(Autoprothrombin IIA) (Anticoagulant protein C) (Blood coagulation factor XIV).		
GN	PROC.		
OS	Sus scrofa (Pig).		
OC	Eukaryota; Metazoa; Chordata; Craniota; Vertebrata; Euteleostomi;		
OC	Mammalia; Eutheria; Cetartiodactyla; Suina; Suidae; Sus.		
OX	NCBI_TaxID=9823;		
RP	(1)		
FN	SEQUENCE FROM N.A.		

CC	TISSUE=Liver;
CC	MEDLINE=21121490; PubMed=11229814;
CC	Grimm D.R., Colter M.B., Brannschweig M., Alexander L.J., Neame P.J.,
CC	Kim H.K.W.,
CC	"Porcine factor V: cDNA cloning, gene mapping, three-dimensional
CC	protein modeling of membrane binding sites and comparative anatomy of
CC	domains";
CC	Cell. Mol. Life Sci. 58:148-159(2001)."
CC	-1- FUNCTION: Protein C is a vitamin K-dependent serine protease that
CC	regulates blood coagulation by inactivating factors Va and VIII
CC	in the presence of calcium ions and phospholipids.
CC	-1- CATALYTIC ACTIVITY: Degradation of blood coagulation factors Va
CC	and VIIIa.
CC	-1- SUBUNIT: Synthesized as a single chain precursor, which is cleaved
CC	into a light chain and a heavy chain held together by a disulfide
CC	bond. The enzyme is then activated by thrombin, which cleaves a
CC	tetradecapeptide from the amino end of the heavy chain; this
CC	reaction, which occurs at the surface of endothelial cells, is
CC	strongly promoted by thrombomodulin.
CC	-1- TISSUE SPECIFICITY: Plasma; synthesized in the liver.
CC	-1- PM: The vitamin K-dependent, enzymatic carboxylation of some Glu
CC	residues allows the modified protein to bind calcium.
CC	-1- MISCELLANEOUS: Calcium also binds, with stronger affinity to
CC	another site, beyond the Gla domain. This Gla-independent binding
CC	site is necessary for the recognition of the thrombin-
CC	thrombomodulin complex.
CC	-1- SIMILARITY: Belongs to peptidase family S1.
CC	-1- SIMILARITY: Contains 2 EGF-like domains.
CC	-----
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CC	-----
CC	EMBL; AF191307; ANG8380.1; -
CC	HSSP; P04070; IPCU.
CC	MEROPS; S01.218; -
CC	InterPro; IPR000152; Aex hydroxyl S.
CC	InterPro; IPR009003; Cys Ser trypsin.
CC	InterPro; IPR001881; EGF Ca.
CC	InterPro; IPR006209; EGF like.
CC	InterPro; IPR002383; GLA_blood.
CC	InterPro; IPR006210; IEGF.
CC	InterPro; IPR001254; Peptidase S1.
CC	InterPro; IPR001314; Peptidase S1A.
CC	InterPro; IPR000294; VitK_dep_Gla.
CC	Pfam; PF00008; EGF_2.
CC	Pfam; PF00594; Gla_1.
CC	Pfam; PF00089; Trypsin_1.
CC	PRINTS; PR00722; CHYMOTRYPSIN.
CC	PRINTS; PR00001; GLABLOOD.
CC	SMART; SM00181; EGF; 2.
CC	SMART; SM00069; Gla; 1.
CC	SMART; SM00020; Tryp_SPC; 1.
CC	PROSITE; PS00010; ASX_HYDROXYL; 1.
CC	PROSITE; PS00022; EGF_1; 1.
CC	PROSITE; PS01186; EGF_2; 2.
CC	PROSITE; PS00026; EGF_3; 1.
CC	PROSITE; PS01187; EGF_Ca; 1.
CC	PROSITE; PS00011; GLU_CARBOXYLATION; 1.
CC	PROSITE; PS00240; TRYPSIN_DOM; 1.
CC	PROSITE; PS00134; TRYPSIN_HIS; 1.
CC	PROSITE; PS00135; TRYPSIN_SER; 1.
CC	-----
CC	Blood coagulation; Glycoprotein; Serine protease;
CC	Gamma-carboxyglutamic acid; Calcium-binding; Vitamin K; Hydroxylation;
CC	EGF-like domain; Repeat; Endothelial cell; Hydrolase; Signal.
CC	-----
CC	FT SIGNAL 1 18
CC	FT PROPE 19 41 BY SIMILARITY.
CC	FT CHAIN 42 459 VITAMIN K-DEPENDENT PROTEIN C.
CC	FT CHAIN 42 196 PROTEIN C LIGHT CHAIN (EV

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DR EMBL; U49933; AAA92956.1; -.
DR HSSP; P04070; 1PCU.
DR MEROPS; S01.218; -.
DR

DR/InterPro; IPR009003; Cys_ser_c1ypsin.
DR/InterPro; IPR001891; EGF_Ca.
DR/InterPro; IPR006209; EGF_like.
DR/InterPro; IPR000000; at1h1-4

DR InterPro: IPR001254; Peptidase_S1.
DR InterPro: IPR001314; Peptidase_S1A.
DR InterPro: IPR000294; VitK_den_GLA.

DR pfam: PF00594; gla; 1.
DR pfam: PF00089; trypsin; 1.
DR PRINTS: PR00722; CHYMOTRYPSIN.

DR SMART; SM00016; Exp. 2.
DR SMART; SM00069; GLA; 1.
DR SMART; SM00020; TYP_SPE; 1.
DR PROJECT; D000010; 30V VYNDOVIT; 1

DR PROSITE: PS01186; EGF_2; 2.
DR PROSITE: PS50026; EGF_3; 1.
DR PROSITE: PS01187; EGF_CA; 1.

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DR PROSITE, PSS0240; TRYPsin_DOM; 1.
DR PROSITE, PSS00134; TRYPsin_HIS; 1.
DR PROSITE, PSS00135; TRYPsin_SER; 1.
```

Accession	Protein	Length	Signal	Hy Simlarity
AF044016	Calceosin-like domain, Repeat; Endothelial cell; Hydrolase; Signal.	27	1	27
U00096	NON_TER	1	1	1
FT000001	NON_TER	1	1	1
FT000002	NON_TER	1	1	1
FT000003	NON_TER	1	1	1
FT000004	NON_TER	1	1	1
FT000005	NON_TER	1	1	1
FT000006	NON_TER	1	1	1
FT000007	NON_TER	1	1	1
FT000008	NON_TER	1	1	1
FT000009	NON_TER	1	1	1
FT000010	NON_TER	1	1	1
FT000011	NON_TER	1	1	1
FT000012	NON_TER	1	1	1
FT000013	NON_TER	1	1	1
FT000014	NON_TER	1	1	1
FT000015	NON_TER	1	1	1
FT000016	NON_TER	1	1	1
FT000017	NON_TER	1	1	1
FT000018	NON_TER	1	1	1
FT000019	NON_TER	1	1	1
FT000020	NON_TER	1	1	1
FT000021	NON_TER	1	1	1
FT000022	NON_TER	1	1	1
FT000023	NON_TER	1	1	1
FT000024	NON_TER	1	1	1
FT000025	NON_TER	1	1	1
FT000026	NON_TER	1	1	1
FT000027	NON_TER	1	1	1
FT000028	NON_TER	1	1	1
FT000029	NON_TER	1	1	1
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FT000031	NON_TER	1	1	1
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FT000074	NON_TER	1	1	1
FT000075	NON_TER	1	1	1
FT000076	NON_TER	1	1	1
FT000077	NON_TER	1	1	1
FT000078	NON_TER	1	1	1
FT000079	NON_TER	1	1	1
FT000080	NON_TER	1	1	1

FT	CHAIN	37	458	VITAMIN K-DEPENDENT PROTEIN C.
FT	CHAIN	37	192	PROTEIN C LIGHT CHAIN (BY SIMILARITY).
FT	CHAIN	195	458	PROTEIN C HEAVY CHAIN (BY SIMILARITY).

FT	SILE	209	210	CLEAVAGE (SI INORDIN)	(SI INORDIN).....
FT	DOMAIN	91	126	EGF-LIKE 1.	
FT	DOMAIN	130	170	EGF-LIKE 2.	
FT	DOMAIN	210	476	GGP/IN PROTEINASE	

FT		(BY SIMILARITY).
FT	MOD_RHS	GAMMA-CARBOXYGLUTAMIC ACID
FT	43	(BY SIMILARITY).
FT	43	

FT	MOD_RES	52	52	(BY SIMILARITY).
FT				GAMMA-CARBOXYGLUTAMIC ACID
FT				(BY SIMILARITY).

FT	MOD - RES	56	56	GAMMA-CARBOXYGLUTAMIC ACID (BY SIMILARITY).
FT	MOD - RES	56	56	GAMMA-CARBOXYGLUTAMIC ACID
FT	MOD - RES	56	56	GAMMA-CARBOXYGLUTAMIC ACID

FT	MOD_RES	62	62	GAMMA-CARBOXYGLUTAMIC ACID (BY SIMILARITY).
FT	MOD_RES	65	65	GAMMA-CARBOXYGLUTAMIC ACID

FT	MOD_RES	107	107	HYDROLYZATION (DI STRENGTHEN.....)
FT	ACT_STATE	250	250	CHARGE RELAY SYSTEM.

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• (X.T.) •

- RA Fahay J., Helton E., Ketteman M., Madan A., Rodrigues S., Sanchez A.,
 RA Whiting M., Madan A., Young A.C., Shevchenko Y., Bouffard G.G.,
 RA Blakeley R.W., Touchman J.W., Green E.D., Dickson M.C.,
 RA Rodriguez A.C., Grimwood J., Schmutz J., Myers R.M.,
 RA Butterfield V.S.N., Krzywinski M.I., Skalska U., Smailus D.E.,
 RA Scherch A., Schein J.E., Jones S.J.M., Maira M.A.,
 RT "Generation and initial analysis of more than 15,000 full-length
 RT human and mouse cDNA sequences.";
 RL Proc. Natl. Acad. Sci. U.S.A. 99:16899-16903(2002).
 RN [16]
 RN SEQUENCE OF 106-461 FROM N.A.
 RX MEDLINE=84272714; PubMed=6589623;
 RA Poster D.C., Davie E.W.;
 RT "Characterization of a cDNA coding for human protein C";
 RL Proc. Natl. Acad. Sci. U.S.A. 81:4766-4770(1984).
 RN [17]
 RN CARBOHYDRATE-LINKAGE SITE ASN-371.
 RX MEDLINE=90293094; PubMed=1694179;
 RA Miletich J.P., Broze G.J. Jr.;
 RT "Beta protein C is not glycosylated at asparagine 329. The rate of
 RT translation may influence the frequency of usage at asparagine-X-
 RT cysteine sites.";
 RL J. Biol. Chem. 265:11397-11404(1990).
 RN [18]
 RN HYDROXYLATION.
 RX MEDLINE=92184750; PubMed=1544894;
 RA Harris R.J., Ling V.T., Spellman M.W.;
 RT "O-linked fucose is present in the first epidermal growth factor
 RT domain of factor XII but not protein C.";
 RL J. Biol. Chem. 267:5102-5107(1992).
 RN [19]
 RN 3D-STRUCTURE MODELING OF 175-450.
 RX MEDLINE=94272342; PubMed=8003977;
 RA Fisher C.L., Greengard J.S., Griffin J.H.;
 RT "Models of the serine protease domain of the human antithrombotic
 RT plasma factor activated protein C and its zymogen.";
 RL Protein Sci. 3:588-599(1994).
 RN [10]
 RN X-RAY CRYSTALLOGRAPHY (2.8 ANGSTROMS) OF 84-461.
 RX MEDLINE=97157472; PubMed=9003757;
 RA Mather T., Oganesyan V., Hof P., Huber R., Foundling S., Eamon C.,
 RT Bode W.;
 RT "The 2.8 A crystal structure of Glu-domainless activated protein C.";
 RL EMBO J. 15:6822-6831(1996).
 RN [11]
 RN REVIEW ON PROC VARIANTS.
 RX MEDLINE=93190290; PubMed=8445940;
 RA Reitsma P.H., Poort S.R., Bernardi F., Gandville S., Long G.L.,
 RA Sala N., Cooper D.N.;
 RT "Protein C deficiency: a database of mutations. For the Protein C & S
 RT Subcommittee of the Scientific and Standardization Committee of the
 RT International Society on Thrombosis and Haemostasis.";
 RL Thromb. Haemost. 69:77-84(1993).
 RN [12]
 RN VARIANT PROC DEFICIENCY CYS-444.
 RX MEDLINE=87204221; PubMed=2437584;
 RA Romeo G., Haas H.J., Staampfl S., Roncuzzi L., Ciametti L.,
 RA Leonard A., Vicente V., Mannucci P.M., Bertina R.M., Peschle C.,
 RA Corlese R.;
 RT "Hereditary thrombophilia: identification of nonsense and missense
 RT mutations in the protein C gene.";
 RL Proc. Natl. Acad. Sci. U.S.A. 84:2829-2832(1987).
 RN [13]
 RN VARIANT PROC DEFICIENCY TRP-211.
 RX MEDLINE=90098906; PubMed=2602169;
 RA Grundy C.B., Chitolie A., Talbot S., Bevan D., Kakkar V.V.,
 RA Cooper D.N.;
 RT "Protein C London 1: recurrent mutation at Arg-169 (CGG->TGG) in
 RT the protein C gene causing thrombosis.";
 RL Nucleic Acids Res. 17:10513-10513(1989).
 RN [14]
 RN VARIANT PROC DEFICIENCY CYS-272.
 RX MEDLINE=91329836; PubMed=1688249;
 RA Reitsma P.H., Poort S.R., Allart C.F., Briet E., Bertina R.M.;
 RT "The spectrum of genetic defects in a panel of 40 Dutch families with
 RT symptomatic protein C deficiency type I: heterogeneity and founder
 RT effects.";
 RL Blood 78:890-894(1991).
 RN [15]
 RN VARIANTS PROC DEFICIENCY ALA-62 AND MET-76.
 RX MEDLINE=92190481; PubMed=1347706;
 RA Bovill E.G., Tomczak J.A., Grant B., Bhushan P., Pillemer E.,
 RA Rainville I.R., Long G.L.;
 RT "Protein C variant: symptomatic type II protein C deficiency
 RT associated with two Glu domain mutations.";
 RL Blood 79:1456-1465(1992).
 RN [16]
 RN VARIANT PROC DEFICIENCY ASP-418.
 RX MEDLINE=92305321; PubMed=1611081;
 RA Sugihara Y., Miura O., Yuen P., Aoki N.;
 RT "Protein C deficiency Hong Kong 1 and 2: hereditary protein C
 RT deficiency caused by two mutant alleles, a 5-nucleotide deletion and
 RT a missense mutation.";
 RL Blood 80:126-133(1992).
 RN [17]
 RN VARIANT PROC DEFICIENCY LEU-289.
 RX MEDLINE=92380660; PubMed=1511988;
 RA Grundy C.B., Chisholm M., Kakkar V.V., Cooper D.N.;
 RT "A novel homozygous missense mutation in the protein C (PROC) gene
 RT causing recurrent venous thrombosis.";
 RL Hum. Genet. 89:683-684(1992).
 RN [18]
 RN VARIANTS PROC DEFICIENCY GLN-220 AND TRP-220.
 RX MEDLINE=92380661; PubMed=151189;
 RA Grundy C.B., Schulman S., Tengborn L., Kakkar V.V., Cooper D.N.;
 RT "Two different missense mutations at Arg 178 of the protein C (PROC)
 RT gene causing recurrent venous thrombosis.";
 RL Hum. Genet. 89:685-686(1992).
 RN [19]
 RN VARIANT PROC DEFICIENCY GLN-220.
 RX MEDLINE=93250852; PubMed=1301959;
 RA Gandville S., Vidaud M., Alach M., Albenc-Gelas M., Fischer A.M.,
 RA Gouault-Hellman M., Toulon P., Fiesinger U.N., Goossens M.;
 RT "Two novel mutations responsible for hereditary type I protein C
 RT deficiency: characterization by denaturing gradient gel
 RT electrophoresis.";
 RL Hum. Mutat. 14:491-500(1992).
 RN [20]
 RN VARIANT PROC DEFICIENCY SER-334.
 RX MEDLINE=92276939; PubMed=1593215;
 RA Yamamoto K., Matsushita T., Sugiyama I., Takamatsu J., Iwasaki E.,
 RA Mada H., Deguchi K., Shirakawa S., Saito H.;
 RT "Homozygous protein C deficiency: identification of a novel missense
 RT mutation that causes impaired secretion of the mutant protein C.";
 RL J. Lab. Clin. Med. 119:682-689(1992).
 RN [21]
 RN VARIANTS PROC DEFICIENCY TRP-38; CYS-42; HIS-42; GLN-271 AND ASN-294.
 RX MEDLINE=93313192; PubMed=8324221;
 RA Gandville S., Albenc-Gelas M., Gausem P., Allard M.-F., Dupuy E.,
 RA Urian-Vague I., Alach M.;
 RT "Five novel mutations located in exons III and IX of the protein C
 RT gene in patients presenting with defective protein C anticoagulant
 RT activity.";
 RL Blood 82:159-168(1993).
 RN [22]
 RN VARIANTS PROC DEFICIENCY GLY-14; GLN-211; TYR-244; GLN-253; LEU-321;
 RX CYS-328; ILE-385; THR-388 AND VAL-388.
 RX MEDLINE=93271391; PubMed=849565;
 RA Poort S.R., Pabinger-Fasching I., Mannhalter C., Reitsma P.H.,
 RA Bertina R.M.;
 RT "Twelve novel and two recurrent mutations in 14 Austrian families
 RT with hereditary protein C deficiency.";
 RL Blood Coagul. Fibrinolysis 4:273-280(1993).
 RN [23]
 RN VARIANT PROC DEFICIENCY TRP-57.
 RX MEDLINE=93271396; PubMed=849568;

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OM protein - protein search, using sw model

Run on: June 2, 2004, 16:50:51 ; Search time 18 Seconds
(without alignments)

1212.077 Million cell updates/sec

Title: US-09-997-623-4

Perfect score: 2324
Sequence: 1 ANSFLEHSHSLRECEIE.....LDWIGHIRKXKAPQKSWAP 419

Scoring table: BLOSUM62
Gapop 10.0 , Gapext 0.5

Searched: 141681 seqs, 52070155 residues

Total number of hits satisfying chosen parameters: 141681

Minimum DB seq length: 0
Maximum DB seq length: 200000000

Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries

Database: SwissProt_42.*

Pred. No. is the number of results predicted by chance to have a
score greater than or equal to the score of the result being printed,
and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Query Match	Length	ID	Description
1	2324	100.0	461	1 PRTC_HUMAN	P04070 homo sapien
2	1882.5	81.0	458	1 PRTC_RABIT	Q28661 oryctolagus
3	1756.5	75.6	453	1 PRTC_PIG	Q28152 sus scrofa
4	1668	71.8	456	1 PRTC_BOVIN	P00745 bos taurus
5	1654.5	71.2	461	1 PRTC_RAT	P11394 rattus norv
6	1641.5	70.6	461	1 PRTC_MOUSE	P33587 rattus muscu
7	835	35.9	161	1 PRTC_MACMU	Q28506 macaca mla
8	814.5	35.0	490	1 FA10_RABIT	O19045 oryctolagus
9	809.5	34.8	492	1 FA10_BOVIN	P00743 bos taurus
10	809	34.8	488	1 FA10_HUMAN	P00742 homo sapien
11	802	34.5	444	1 FA7_RABIT	P28139 oryctolagus
12	801.5	34.5	475	1 FA10_CHICK	P25155 gallus gall
13	783	33.7	466	1 FA7_HUMAN	P24577 bos taurus
14	779.5	33.5	407	1 FA7_BOVIN	P24577 bos taurus
15	770	33.1	446	1 FA7_MOUSE	P19540 mus muscu
16	763	32.8	452	1 FA9_CANPA	Q35nd7 pan troglod
17	740	31.8	461	1 FA9_PANTR	P00740 homo sapien
18	735	31.7	461	1 FA9_HUMAN	P33707 homiocephal
19	726	31.2	376	1 FA9_MOUSE	P16224 mus muscu
20	726	31.2	459	1 FA9_MOUSE	P16224 mus muscu
21	724	31.2	376	1 FA10_TROCA	P81428 troglodictis
22	717	30.9	157	1 PRTC_CANPA	Q28472 felis silve
23	716	30.8	157	1 PRTC_FELCA	Q28472 felis silve
24	714.5	30.7	416	1 FA9_BOVIN	P00741 bos taurus
25	700	30.1	157	1 PRTC_HORSE	Q28315 equus caball
26	661	28.4	157	1 PRTC_CAPII	Q28315 capra hircu
27	562.5	24.2	622	1 THRB_HUMAN	P00774 homo sapien
28	538.5	23.2	625	1 THRB_BOVIN	P00774 homo sapien
29	533	22.9	618	1 THRB_MOUSE	P19221 mus muscu
30	525.5	22.6	617	1 THRB_RAT	P19221 mus muscu
31	510.5	22.0	811	1 TM66_MOUSE	Q94038 rattus norv
32	475.5	20.5	653	1 HGRA_MOUSE	O94038 mus muscu
33	474	20.4	811	1 TM66_HUMAN	Q81u80 homo sapien

34	473.5	20.4	655	1 HGRA_HUMAN	Q04756 homo sapien
35	468	20.1	400	1 PRTC_HUMAN	P22891 homo sapien
36	448	19.3	396	1 PRTC_BOVIN	P00744 bos taurus
37	439.5	18.9	275	1 TRYT_PIG	Q28241 sus scrofa
38	427	18.4	271	1 FA9_PIG	P16293 sus scrofa
39	426	18.3	638	1 KAL_MOUSE	P26262 mus muscu
40	424.5	18.3	638	1 KAL_HUMAN	P03952 homo sapien
41	420.5	18.1	699	1 CRAR_HUMAN	P48740 h complamen
42	420	18.1	275	1 FA9_RABIT	P16292 oryctolagus
43	419	18.0	625	1 FA10_HUMAN	P03951 homo sapien
44	418.5	18.0	455	1 TM62_MOUSE	O94038 mus muscu
45	418	18.0	490	1 TM62_MOUSE	Q91ig8 mus muscu

ALIGNMENTS

RESULT 1
ID PRTC_HUMAN STANDARD; PRT; 461 AA.
AC P04070; Q15189; Q15190; Q16001;
DT 01-NOV-1986 (Rel. 03, Created)
DT 01-NOV-1986 (Rel. 03, Last sequence update)
DT 15-MAR-2004 (Rel. 43, Last annotation update)
DE Vitamin-K-dependent protein C precursor (EC 3.4.21.69)
DE (Autoproteolytic IIA) (Anticoagulant protein C) (Blood coagulation factor XIV).
GN PROC.
OS Homo sapiens (Human).
OC Eukaryota; Metazoa; Chordata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Primates; Catarrhini; Hominiidae; Homo.
OX NCBI_Taxid=9606;
RN [1]
RP SEQUENCE FROM N.A.
RX MEDLINE=85270390; PubMed=2991887;
RA Foster D.C., Yoshitake S., Davie E.W.;
RT The nucleotide sequence of the gene for human protein C.;
RL Proc. Natl. Acad. Sci. U.S.A. 82:4673-4677(1985).
RN [2]
RP SEQUENCE FROM N.A.
RX MEDLINE=85269639; PubMed=2991859;
RA Beckmann R.J., Schmidt R.J., Satterre R.F., Plutsky J., Crabtree G.R.,
RT Long G.L.;
RT "The structure and evolution of a 461 amino acid human protein C precursor and its messenger RNA, based upon the DNA sequence of cloned human liver cDNAs.";
RL Nucleic Acids Res. 13:5233-5247(1985).
RN [3]
RP SEQUENCE FROM N.A.
RX MEDLINE=86120978; PubMed=3511471;
RA Plutsky J., Hoskins J.A., Long G.L., Crabtree G.R.;
RT "Evolution and organization of the human protein C gene.";
RL Proc. Natl. Acad. Sci. U.S.A. 83:546-550(1986).
RN [4]
RP SEQUENCE FROM N.A.
RX Rieder W.O., Carrington D.P., Chung M.-W., Lee K.L., Poel C.L., Yi Q.,
RT Nickerson D.A.;
RT Submitted (JUN-2001) to the EMBL/GenBank/DBJ databases.
RN [5]
RP SEQUENCE FROM N.A.
RX TTSSIE-COLON; PubMed=12477932;
RX MEDLINE=22386257; PubMed=12477932;
RA Strausberg R.L., Feingold E.A., Grouse L.H., Derge J.G.,
RA Klausner R.D., Collins F.S., Wagner L., Shenmen C.M., Schuler G.D.,
RA Altschul S.F., Zeeberg B., Buetow K.H., Schaefer C.F., Bhat N.K.,
RA Hopkins R.F., Jordan H., Moore T., Max S.I., Wang J., Hsieh F.,
RA Diachenko L., Marusina K., Farmer A.A., Rubin G.M., Hong L.,
RA Scapleorn M., Soares M.B., Bonaldo M.F., Casavant T.L., Scheetz T.B.,
RA Brownstein M.J., Ustin T.B., Toshiyuki S., Carninci P., Prange C.,
RA Raha S.S., Loquellano N.A., Peters G.J., Adamson R.D., Miliaty S.J.,
RA Bosak S.A., McEwan P.J., McKernan K.J., Malek J.A., Guarnatone P.H.,
RA Richards S., Wolley K.C., Hale S., Garcia A.M., Gay L.J., Halyk S.W.,
RA Villalón D.K., Muny D.M., Sodergren E.J., Lu X., Gibbs R.A.,

F:191-192/Cleavage site: Arg-Ala (coagulation factor IXa) #status experimental
 F:203,213/Binding site: carbohydrate (Asp) (covalent) #status experimental
 F:205,215/Binding site: carbohydrate (Thr) (covalent) #status experimental
 F:226-227/Cleavage site: Arg-Val (coagulation factor IXa) #status experimental

Query Match 31.7%; Score 736; DB 1; Length 461;
 Best Local Similarity 35.4%; Pred. No. 2e-46;
 Matches 150; Conservative 72; Mismatches 156; Indels 46; Gaps 10;

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QY 5 LEEIRHSSLEBCEIEICDPFEAKETPQNYDITLAFKSKHYDQCLVPLEHPASLCC 64
DB 52 LEEFVQNLRECEMEKCSFEARAEVEMERTEPMTQYDGDQCSNP-----CL 103
QY 65 GHGTCIDIGISFSCDRCSCMBERFCQREYFNLCSLDNGCTHYCLEYGM-RCSGAP 123
DB 104 NGGSCKDIDISYECWCPFGFEGKNCGLDYV--CNINRGCEGCKNSADNRVCSCTBG 160
QY 124 YKLGDDLLQCHPAVKPFCGRPKMEKRSKSLKR-----DPEDEQDQV----- 167
DB 161 YALAEKQSCBPVAPPCGRVSVGQTSKLTREANPPVDVYVNSTEAFITLNTQSTQS 220
QY 168 -----PRLDGKMTFRGDSFQVYLLDSKKKLAAGAVLHPSWVLTAAHCDSSKLLVRL 223
DB 221 FMDFTRVVGGEDAKPQFPWQVY--LNGKVAFQCGSYNEKMTVTAACHCETGVKITVVA 279
QY 224 GYDILARKMEKIEDLDIKVEFVHPVYSKST--DNDIALHLAOPATLSQTIYPICLPDS 281
DB 280 GBNHETETEHTQKRVNITITPHAYTNALNKNHIDIALHLEDEPLVANSYTPICLADK 339
QY 282 GLARELNLQAGQETLVTGNG--YHSREKAKENRTFVNLFIKIPVPHNEGSEVSNMV 339
DB 340 ETTNIFLEK--SGVYSGMGRVPHKGRS-----ALVQLYRPLVDYRATCLRSKTEFI 390
QY 340 SENMLCAGITLDRDACEGDSGPVYASFGCTMFLVGLVSGEGCGLLHMYGTYTKVRY 399
DB 391 YNNMFCAGFHGGRHDSQCGDSGPHYTEVEBTSFLLGILSMGECAMKGRGYITKVSRY 450
QY 400 LDMT 403
DB 451 VMMI 454

```

RESULT 14

coagulation factor IXa (EC 3.4.21.22) precursor - mouse (fragment)
 C:Species: Mus musculus (house mouse)
 C:Date: 07-Sep-1990 #sequence revision 07-Sep-1990 #ext_change 16-Jul-1999
 C:Accession: J00419; I49667
 R:Hu, S.M.; Stafford, D.W.; Ware, J.
 Gene 86, 275-278, 1990
 A>Title: Deduced amino acid sequence of mouse blood coagulation factor IX.
 A:Reference number: J00419; M01D:90215309; PMID:2333576
 A:Accession: J00419
 A:Molecule type: mRNA
 A:Residues: 1-459 <MUS>
 A:Cross-references: GB:M23109; NID:g193317; PIDN:AAA37629.1; PID:g87158
 A:Experimental source: liver
 R:Starkat, G.; Koebel, D.D.; Sommer, S.S.
 Genomics 6, 133-143, 1990
 A>Title: Direct sequencing of the activation peptide and the catalytic domain of the fac
 A:Reference number: I46580; M01D:90152675; PMID:2303254
 A:Accession: I49667
 A:Status: preliminary; translated from GB/EMBL/DBJ
 A:Molecule type: mRNA
 A:Residues: 166-362, 'Q', 364-387, 'T', 389-451 <RES>
 A:Cross-references: GB:M26236; NID:g193319; PIDN:AAA37630.1; PID:g193320
 C:Comment: This protein plays a critical role in blood coagulation.
 C:Superfamily: coagulation factor X; EGF homology; Gla domain homology; trypsin homology
 C:Keywords: beta-hydroxyaspartic acid; blood coagulation; calcium binding; carboxylglutam
 F:17-34/Domain: signal sequence (fragment) #status predicted <SIG>
 F:17-34/Domain: propeptide #status predicted <PRO>
 F:19-79/Domain: Gla domain homology <GLA>
 F:35-459/Product: coagulation factor IX #status predicted <MAT>

F:85-116/Domain: EGF homology <EG1>
 F:122-158/Domain: EGF homology <EG2>
 F:225-452/Domain: trypsin homology <TRY>
 F:41, 42, 49, 51, 54, 55, 60, 61, 64, 67, 70, 74/Modified site: gamma-carboxyglutamic acid (Glu) #st
 F:52-57, 85-96, 90-105, 107-116, 122-133, 129-143, 145-159, 166-333, 250-266, 380-394, 405-433/Dist
 F:265,313,409/Active site: His, Asp, Ser #status predicted

Query Match 31.2%; Score 726; DB 2; Length 459;
 Best Local Similarity 35.4%; Pred. No. 1.e-45;
 Matches 155; Conservative 68; Mismatches 151; Indels 64; Gaps 12;

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QY 5 LEEIRHSSLEBCEIEICDPFEAKETPQNYDITLAFKSKHYDQCLVPLEHPASLCC 64
DB 40 LEEFVQNLRECEMEKCSFEARAEVEMERTEPMTQYDGDQCSNP-----CL 91
QY 65 GHGTCIDIGISFSCDRCSCMBERFCQREYFNLCSLDNGCTHYCLEYGM-RCSGAP 123
DB 92 NGGSCKDIDISYECWCPFGFEGKNCGLDYV--CNINRGCEGCKNSADNRVCSCTBG 148
QY 124 YKLGDDLLQCHPAVKPFCGRPKMEKRSKSLKR-----DPEDEQDQV----- 154
DB 149 YQAEQDSCEPTVPFCGRASISYSKKTITRAETVSNVDYENSTEAVFLQDITDCAI 208
QY 155 LKQDTEDQDQV--PRLDGKMTFRGDSFQVYLLDSKKKLAAGAVLHPSWVLTAAHGM 213
DB 209 LNNVTSSSHSLNDDTRVVGSENAKRPQVPI--LNGELAPCGGATINERKMTVAHCL 267
QY 214 DESKLLVNLGYDLRMEKIEDLDIKVEFVHPVYSKST--DNDIALHLAOPATLSQ 271
DB 268 KPGDKLEVVAQEVNIDKDETEGRNVIRITPHQYNAITNKNYSHDILHLEDEPLVANS 327
QY 272 TVPICLPDPSGLARELNLQ-----AGQETLVTGNGVHSREKAKENRTFVNLFIKIPV 325
DB 328 YVPICT-----VAAREXTNIFLFGSG--YVSGMGRVPHKGRS-----ILQYLKVP 374
QY 326 VPHNEGSEVSNMVSEMLCAGITLDRDACEGDSGPVYASFGCTMFLVGLVSGEGCG 385
DB 375 VDRATCLRSITFTTYNNMFCAGYRSGKDSGDSGPHYTEVEBTSFLLGILSMGEC 434
QY 386 LNNYGVYTKVSRYLDMT 403
DB 435 MKGRGYITKVSRYMMI 452

```

RESULT 15

coagulation factor IXa (EC 3.4.21.22) precursor - bovine
 N:Alternate names: Christmas factor
 C:Species: Bos primigenius taurus (cattle)
 C:Date: 30-Nov-1980 #sequence revision 03-Aug-1984 #ext_change 16-Jul-1999
 C:Accession: A14757; B20274; I45891; A00923
 R:Katayama, K.; Ericsson, L.H.; Enfield, D.L.; Walsh, K.A.; Neurath, H.; Davie, E.W.; Tit
 Proc. Natl. Acad. Sci. U.S.A. 76, 4990-4994, 1979
 A>Title: Comparison of amino acid sequence of bovine coagulation factor IX (Christmas fac
 A:Reference number: A14757; M01D:80056619; PMID:291916
 A:Accession: A14757
 A:Molecule type: protein
 A:Residues: 1-63, 'T', 65-416 <XAT>
 R:McMullen, B.A.; Fujikawa, K.; Kisiel, W.
 Biochem. Biophys. Res. Commun. 115, 8-14, 1983
 A>Title: The occurrence of beta-hydroxyaspartic acid in the vitamin K-dependent blood coe
 A:Reference number: A20274; M01D:83308813; PMID:6688525
 A:Accession: B20274
 A:Molecule type: protein
 A:Residues: 59-63, 'X', 65-69 <WCM>
 R:Choo, K.H.; Gould, K.G.; Rees, D.V.G.; Brownlee, G.G.
 Nature 299, 178-180, 1982
 A>Title: Molecular cloning of the gene for human anti-haemophilic factor IX.
 A:Reference number: I45891; M01D:8227386; PMID:6287285
 A:Accession: I45891
 A:Status: translated from GB/EMBL/DBJ
 A:Molecule type: mRNA
 A:Residues: 52-139 <CHO>

A:Accession: A21337
A:Molecule type: mRNA
A:Residues: 1-193, 'T', 195-461 <JAY>
A:Cross-references: GB:J000137; NID:9182610; PIDN:AAA52763.1; PID:g182611
R:Jagadeeswaran, P.; Lavelle, D.E.; Kaul, R.; Mohandas, T.; Warren, S.T.
Somatic Cell Mol. Genet. 10, 465-473, 1984
A:Title: Isolation and characterization of human factor IX cDNA: Identification of Tag I
A:Reference number: A37546; MUID:84300526; PMID:6089357
A:Accession: A37546
A:Molecule type: mRNA
A:Residues: 38-193, 'T', 195-326 <JAG>
A:Cross-references: GB:M35672
R:Kuzach, K.; Davie, E.W.
Proc Natl Acad Sci U S A. 79, 6461-6464, 1982
A:Title: Isolation and characterization of a cDNA coding for human factor IX.
A:Reference number: A30623; MUID:83065193; PMID:6599130
A:Accession: A30623
A:Molecule type: mRNA
A:Residues: 1-12, 'S', 14-73, 'P', 75-82, 'K', 84-203, 'P', 205-216, 'G', 218-298, 'A', 299-356, 'A',
A:Cross-references: GB:J00136; NID:g182608; PIDN:AAA98726.1; PID:g182609
A:Experimental source: liver
R:Thakran, J.; Strickland, D.; Burgess, W.; Drohan, W.N.; Clark, D.B.
Vox Sang. 58, 21-29, 1990
A:Title: Development of an immunoaffinity process for factor IX purification.
A:Reference number: A60486; MUID:90194857; PMID:2316207
A:Accession: A60486
A:Molecule type: protein
A:Residues: 47-52, 'XX', 55-60, 'X', 62, 'XX', 65 <THA>
R:McMullen, B.A.; Fujikawa, K.; Kisiel, W.
Biochem Biophys Res Commun. 115, 8-14, 1983
A:Title: The occurrence of beta-hydroxyaspartic acid in the vitamin K-dependent blood co
A:Reference number: A20274; MUID:83308813; PMID:6688526
A:Accession: A20274
A:Molecule type: protein
A:Residues: 105-109, 'X', 111-115 <MCM>
R:Balland, A.; Faure, T.; Carvallo, D.; Cordier, P.; Ulrich, P.; Fournet, B.; de la Sall
Eur J Biochem. 172, 565-572, 1988
A:Title: Characterization of two differently processed forms of human recombinant factor
A:Reference number: S02527; MUID:8816735; PMID:3280312
A:Accession: S02527
A:Molecule type: protein
A:Residues: 29-63 <BMU>
A:Note: processed forms expressed in recombinant system
R:Jallat, S.; Perraud, P.; Dalemans, W.; Balland, A.; Dieterle, A.; Faure, T.; Meunier,
EMBO J. 9, 3295-3301, 1990
A:Title: Characterization of recombinant human Factor IX expressed in transgenic mice at
A:Reference number: S12058; MUID:91006024; PMID:2209546
A:Accession: S12058
A:Molecule type: mRNA; protein
A:Residues: 1-68 <JAL>
A:Note: processed forms expressed in recombinant system
R:Handford, P.A.; Barton, W.; Mayhew, M.; Willis, A.; Beesley, T.; Brownlee, G.G.; Campbe
EMBO J. 9, 475-480, 1990
A:Title: The first BGF-like domain from human factor IX contains a high-affinity calcium
A:Reference number: S12377; MUID:90151623; PMID:2406120
A:Accession: S12377
A:Molecule type: protein
A:Residues: 92-130 <HAN>
A:Note: NMR detection of calcium binding by domain expressed in recombinant system
R:de la Salle, C.; Charmanier, J.L.; Baas, M.J.; Schwartz, A.; Wiesel, M.L.; Grunbaum,
Thromb Haemost. 70, 370-371, 1993
A:Title: A deletion located in the 3' non translated part of the factor IX gene responsi
A:Reference number: I59612; MUID:94054330; PMID:8263150
A:Accession: I59612
A:Status: translated from GB/EMBL/DBD
A:Molecule type: DNA
A:Residues: 444-461 <RBS>
A:Cross-references: GB:S66752; NID:9439773; PIDN:AB28688.1; PID:9439774
R:Stofflet, E.S.; Koebel, D.D.; Saikar, G.; Sommer, S.S.
Science. 239, 491-494, 1988
A:Title: Genomic amplification with transcrip sequencing.
A:Reference number: I59529; MUID:88127096; PMID:3340835
A:Accession: I59529
A:Status: translated from GB/EMBL/DBD
A:Molecule type: DNA
A:Residues: 290-359 <RE2>
A:Cross-references: GB:M19063; NID:g182622; PIDN:AAA52456.1; PID:g182623
R:Gargwal, K.L.; Kawabata, S.; Takao, T.; Murata, H.; Shimonishi, Y.; Nishimura, H.; Iwe
Biochemistry 33, 5167-5171, 1994
A:Title: Activation peptide of human factor IX has oligosaccharides O-glycosidically lin
A:Reference number: A54255; MUID:94227047; PMID:8172882
A:Accession: A54255
A:Molecule type: protein
A:Residues: 'D', 204, 'X', 206-211, 212, 'D', 214, 'X', 216-221, 'D' <AGA>
A:Note: the residues designated 'X' were determined to be threonine bound to carbohydrate
R:Di Scipio, R.G.; Kuzach, K.; Davie, E.W.
J. Clin. Invest. 61, 1528-1538, 1978
A:Title: Activation of human factor IX (Christmas factor).
A:Reference number: A18483; MUID:78194509; PMID:655613
A:Contents: annotation; activation; active site; carbohydrate binding
R:McGraw, R.A.; Davis, L.M.; Noves, C.M.; Graham, J.B.; Roberts, H.R.; Stafford, D.W.
Am. Soc. Hematol. Abstr. 64(suppl.1), 262a, 1984
A:Reference number: A37569
A:Contents: annotation
A:Note: 194-Thr was also found
R:Morita, T.; Isacso, B.S.; Esmen, C.T.; Johnson, A.E.
J. Biol. Chem. 259, 5698-5704, 1984
A:Title: Derivatives of blood coagulation factor IX contain a high affinity Ca2+-binding
A:Reference number: A37543; MUID:84185715; PMID:6425236
A:Contents: annotation; calcium binding
R:Morita, T.; Isacso, B.S.; Esmen, C.T.; Johnson, A.E.
J. Biol. Chem. 260, 2583, 1985
A:Reference number: A37544
A:Contents: annotation; calcium binding, correction
R:Berntley, A.K.; Rees, D.J.G.; Rizza, C.; Brownlee, G.G.
Cell 45, 343-348, 1986
A:Title: Defective propeptide processing of blood clotting factor IX caused by mutation
A:Reference number: A37545; MUID:86189947; PMID:3009203
A:Contents: annotation; signal sequence cleavage site
R:Senihiro, K.; Kawabata, S.I.; Miyata, T.; Takeya, H.; Takamatsu, J.; Ogata, K.; Kamiya,
J. Biol. Chem. 264, 21257-21265, 1989
A:Title: Blood clotting factor IX B(N) Nagoya: substitution of arginine 180 by tryptophan
A:Reference number: A30622; MUID:90078229; PMID:2592373
A:Contents: annotation; sequence of mutant B(N) Nagoya
A:Contents: annotation; glycosylation, and cleavage sites
R:Barton, M.; Norman, D.G.; Harvey, T.S.; Handford, P.A.; Mayhew, W.; Tse, A.G.D.; Brownlee
submitted to the Brookhaven Protein Data Bank, November 1991
A:Reference number: A51252; PDB:1IIX
A:Contents: annotation; conformation by (1)H-NMR, residues 92-130
A:Note: recombinant form expressed in yeast
C:Comment: Factor IX is activated by factor XIa, which excises the activation peptide pr
C:Comment: The gamma-carboxyglutamic acid residues arise by posttranslational, vitamin K
C:Comment: Calcium binds to the gamma-carboxyglutamic acid (Gla) residues and, with stro
C:Genetics:
A:Gene: GDB:F9
A:Cross-references: GDB:119900; OMIM:306900
A:Map position: Xq27.1-Xq27.2
A:Introns: 30/1; 84/2; 93/1; 131/1; 174/1; 241/3; 280/1
C:Function:
A:Description: catalyzes the proteolytic activation of coagulation factor X in the prese
A:Pathway: blood coagulation intrinsic pathway
C:Superfamily: coagulation factor X; EGF homology; Gla domain homology; trypsin homology
C:Keywords: beta-hydroxyaspartic acid; blood coagulation; calcium binding; carboxyglutam
F:1-28/Domain: signal sequence #status predicted <SIG>
F:29-46/Domain: propeptide #status experimental <PPT>
F:51-91/Domain: Gla domain homology <GLA>
F:91-91/Domain: Gla domain homology <GLA>
F:97-191/Product: coagulation factor XIa light chain #status experimental <AUC>
F:97-128/Domain: EGF homology <EG1>
F:134-170/Domain: EGF homology <EG2>
F:192-226/Domain: activation peptide #status experimental <ACT>
F:227-461/Product: coagulation factor IXa heavy chain #status experimental <AHC>
F:227-464/Domain: trypsin homology <TRY>
F:53,54,61,63,66,67,72,73,76,79,82,86/Modified site: gamma-carboxyglutamic acid (Glu) #
F:64-69,97-108,102-119,128,134-145,141-155,157-170,178-335,252-268,382-396,407-435/D
F:99/Binding site: carbohydrate (Ser) (covalent) #status experimental
F:110/Modified site: erythro-beta-hydroxyaspartic acid (Asp) #status experimental

```

Db      201 GCPWQALMNG-STLLCGSLDTHWVSAACFCDKLSLRNTIYLAGEHDLSEHEDB 259
QY      236 LDIDKEVFNHYSTSTNDIALHLAQPATLSOTVPCDPSGLARBLNAGQET 295
Db      260 QVRHVAOLIMDPKVPKTDHIALRLQPALTNVNPVCLPERNFSSSTLATI-RFS 318
QY      296 IYTWGNG---YHSSREKAKRNTFVNLFIKPVVFNHSCSEVM-----SNVSEMLCAG 347
Db      319 RVSGMGQILYKALAE-----LMAIDVPELMQDCVDSSEHNGSPVYTGMPFCAQ 370
QY      348 ILGDRODACGDSGCGPVASFHGTFTVLGVSNGCGGLHNYGVYTKYSRYLDWIGHI 407
Db      371 YLDGSKDCKGDSGCPHATSYHGT-YLGVVNSGECARVGVGVYTRVSDTEWLSRLM 429
QY      408 RDK 410
Db      430 RSK 432

```

RESULT 12

coagulation factor IXa (EC 3.4.21.22) precursor - dog

C/Species: Canis lupus familiaris (dog)

C/Date: 10-Sep-1999 #sequence_revision 10-Sep-1999 #text_change 10-Sep-1999

C/Accession: A30351; 146201

R/Evans, J.P.; Matzke, H.H.; Ware, J.L.; Stafford, D.W.; High, K.A.

Blood 74, 207-212, 1989

A/Title: Molecular cloning of a cDNA encoding canine factor IX.

A/Reference number: A30351; PMID:8932338; PMID:2752110

A/Accession: A30351

A/Status: preliminary

A/Molecule type: mRNA

A/Residues: 1-452 <EVS>

A/Cross-references: GB:M21757; NID:g972719; PIDN:AA35006.1; PID:g163948

R/Abelrod, J.H.; Read, W.S.; Brinkhaus, K.M.; Verma, I.W.

Proc. Natl. Acad. Sci. U.S.A. 87, 5173-5177, 1990

A/Title: Phenotypic correction of factor IX deficiency in skin fibroblasts of hemophilic

A/Reference number: 146201; PMID:90311364; PMID:2367529

A/Accession: 146201

A/Status: preliminary; translated from GB/EMBL/DBJ

A/Molecule type: mRNA

A/Residues: 1-452 <NEX>

A/Cross-references: GB:M33826; NID:g163949; PIDN:AA30844.1; PID:g163950

C/Superfamily: coagulation factor IX; EGF homology; Gla domain homology; trypsin homology

C/Keywords: beta-hydroxyaspartic acid; blood coagulation; calcium binding; carboxyglutamic

F:1-21/Domain: signal sequence #status predicted <PRO>

F:22-40/Domain: propeptide #status predicted <PRO>

F:24-84/Domain: Gla domain homology <Gla>

F:41-452/Product: coagulation factor IX #status predicted <MAT>

F:90-121/Domain: EGF homology <EGF>

F:127-163/Domain: EGF homology <EG2>

F:218-445/Domain: trypsin homology <TRY>

F:56/57,54,56,59,60,65,66,69,72,75,79/Modified site: gamma-carboxyglutamic acid (Glu) #

F:57-92,90-101,95-110,112-121,127-133,134-148,150-163,171-226,243-259,373-387,398-426/DI

F:258,306,402/Active site: His, Asp, Ser #status predicted

Query Match 32.8%; Score 763; DB 1; Length 452;

Best Local Similarity 36.9%; Pred. No. 2,1e-48;

Matches 158; Conservative 73; Mismatches 141; Indels 56; Gaps 12;

```

QY      5 LEEIRHSLRECEIEECDEFEKELFQNVDTLAEMSKHVDGQVLPHEHCASLCC 64
Db      45 LEEFVGNLERCEIEKCSFEERAEVFNTEKTEFEKQYVGDQCESNP-----CL 96
QY      65 GHEGCTIDIGSFCDCSSGWEFGCORREHFNLSINDGCHYCLEVEMRR---CSQA 121
Db      97 NDGVKDDIDNSYECACAGFEGKNCGLDVT---NNNGKCKQFC--KLGPDKVVCSCCT 151
QY      122 PGYKLDLQCHPAVYPCGR---PFRMEKESHLKRTDEODQVD-----CL 167
Db      152 TGYQALADORSCEPAVYPCGRVSYPHISMRTAETLFSNMDYENSTREVEKILNDVTP 211

```

```

QY      168 ---PELIDGKMTGRDSEPMQVVLDDSKKLAGAVLHPSVTLTAACHDESKLIVL 223
Db      212 LNDFTVVCAGKADKQFPMQ-VLNGVADAFCCGSILNEKVVWTAACHDEPVKTIIVA 270
QY      224 GEYDLARMEKNEIDLDKEVFNHYSTSTNDIALHLAQPATLSOTVPCDPSGLARBLNAGQET 295
Db      271 GEHNTKEHREHQRNVTITLHSHYNATIKYNHDALAEDEPLTNSVYPTC--- 326
QY      282 GLARELNO-----AGQFTLVGWGYSREKAKRNTFVNLFIKPVVFNHSCSEVM 335
Db      327 -IDREYSNIFAKGSG---YSGMGRFVFNKGRAS-----LQYLVKVPVDRATCLARST 377
QY      336 SNVSEMLCAGILGDRODACGDSGCGPVASFHGTFTVLGVSNGCGGLHNYGVYTKYSRYLDWIGHI 407
Db      378 KFTLYNNMFCAGFHGCGKDSQGDSCGPHVTEVHGISFTLGIIISWEECAMKGYGIYTK 437
QY      396 VSRVLDWI 403
Db      438 VSRVYVMI 445

```

RESULT 13

KEHU

coagulation factor IXa (EC 3.4.21.22) precursor [validated] - human

N/Alternate names: antihemophilic factor B; Christmas factor

C/Species: Homo sapiens (man)

C/Date: 17-Dec-1982 #sequence_revision 30-Jun-1987 #text_change 15-Sep-2000

C/Accession: A00922; A37570; A30511; A32989; A22673; A21337; A37546; A30623; A60486; A202

R/Yoshitake, S.; Schach, B.G.; Foester, D.C.; Davie, E.W.; Kurechi, K.

Biochemistry 24, 3736-3750, 1985

A/Title: Nucleotide sequence of the gene for human factor IX (antihemophilic factor B).

A/Reference number: A00922; PMID:8600558; PMID:2994716

A/Accession: A00922

A/Status: DNA

A/Molecule type: DNA

A/Residues: 1-461 <YOS>

A/Cross-references: GB:K02402; NID:g182612; PIDN:AA59620.1; PID:g182613

R/Anson, D.S.; Choo, K.H.; Rees, D.J.G.; Giamelli, F.; Gould, K.; Huddleston, J.A.; Brox

EMBO J. 3, 1053-1060, 1984

A/Title: The gene structure of human anti-hemophilic factor IX.

A/Reference number: A37570; PMID:84236100; PMID:6329734

A/Accession: A37570

A/Molecule type: DNA

A/Residues: 1-461 <ANS>

A/Cross-references: GB:K02048

R/Reitma, P.H.; Bertina, R.M.; Ploos van Amstel, J.K.; Riemeis, A.; Briet, E.

Blood 72, 1074-1076, 1988

A/Title: The putative factor IX gene promoter in hemophilia B Leyden.

A/Reference number: A30511; PMID:88327116; PMID:3416069

A/Accession: A30511

A/Molecule type: DNA

A/Residues: 8-24 <REI>

A/Cross-references: EMBL:X55008; NID:g311288; PIDN:CA838245.2; PID:g4469253

R/Koeberl, D.D.; Bottema, C.D.K.; Buerstedde, J.M.; Sommer, S.S.

Am. J. Hum. Genet. 45, 448-457, 1989

A/Title: Functionally important regions of the factor IX gene have a low rate of polymor

A/Reference number: A32989; PMID:89371752; PMID:2773937

A/Accession: A32989

A/Status: not compared with conceptual translation

A/Molecule type: DNA

A/Residues: 30-92 <KOB>

R/McGraw, R.A.; Davis, L.M.; Noyes, C.M.; Lundblad, R.L.; Roberts, H.R.; Graham, J.B.; St

Proc. Natl. Acad. Sci. U.S.A. 82, 2847-2851, 1985

A/Title: Evidence for a prevalent dimorphism in the activation peptide of human coagulat

A/Reference number: A22673; PMID:85190593; PMID:3857619

A/Accession: A22673

A/Molecule type: mRNA

A/Residues: 1-193, 195-461 <MOG>

A/Cross-references: GB:M11309; NID:g190552; PIDN:AA52023.1; PID:g180553

A/Note: the authors translated the codon ACA for residue 29 as Tyr

R/Daye, M.; de la Salle, H.; Schamber, F.; Bailand, A.; Kohli, V.; Fridejli, A.; Toisloshe

Nucleic Acids Res. 11, 2325-2335, 1983

A/Title: Isolation of a human anti-hemophilic factor IX cDNA clone using a unique 52-ba

A/Reference number: A21337; PMID:89220788; PMID:6687940

Db 113 SPQNGSGCKDQLQSYICFLPAFEGNCEHFKDOLICVNGGCGEYCSHDHTKTRSC 172

Qy 119 SCAPGYKLDGDLQCHPAVKFPCGRPMKEMKKSHLKRTEDQEDQVDPRLDGMKTR 178

Db 173 RCHGYSLLADGVSCTPVEYPOGK-IPLEKRNA-----SKQGHVGVKVCCK 221

Qy 179 GDSFWQVLLDSSKKKLAGAVLIHPSWVLTAAHCMDSEK---KLIVRLGEYDLRRMEKE 235

Db 222 GECFWQVLLLVNGAQL-CGELLINTWVSAAHCEFDIKKWRRLTAVIGHDLSEHDGDE 280

Qy 226 LDDLIKVEFVHBNYSKSTTNDIALHLAQPATLSQTVIPCLPDSGLARELNQAGQET 295

Db 281 QSRVAVQVLIPEYVGTNNIDIALRLHQPVLTDVVDLCLPETSERTLAFV-RFS 339

Qy 296 LVYWGVSRSREKREKRTVLANFKIPVPHNCESEVN-----SNVSNMLCAGILG 350

Db 340 LVSGWQVLLDRLGANTL-----LEMLVNLVPRLLTDQCLQSRKYGSEPNITRYFCAGYSD 394

Qy 351 DRDAGCGDSGGPMVWSPHGTWFLVGLVSGEGCGLLHNYGVYTKVRYLDMIGHITRDK 410

Db 395 GSKVCKGDSGGPHATHTRGTYLGLVSGGCGATVGHGVYTRVSYTEMQLKMRSE 454

Qy 411 EAP 413

Db 455 PRP 457

RESULT 10

coagulation factor VIIa (BC 3.4.21.21) - bovine

C:Species: Bos primigenius taurus (cattle)

C>Date: 21-May-1990 #sequence_revision 23-Mar-1995 #text_change 16-Jul-1999

C:Accession: A11979; C20274

R:Takeya, H.; Kawabata, S.; Nakagawa, K.; Yamamichi, Y.; Miyata, T.; Iwanaga, S.

J. Biol. Chem. 263, 14868-14877, 1988

A:Title: Bovine factor VII. Its purification and complete amino acid sequence.

A:Reference number: A31979; PMID:8908362; PMID:3049594

A:Accession: A11979

A:Molecule type: protein

A:Residues: 1-407 <TK>

R:McMullen, B.A.; Fujikawa, K.; Kisiel, W.

Biochem. Biophys. Res. Commun. 115, 8-14, 1983

A:Title: The occurrence of beta-hydroxyaspartic acid in the vitamin K-dependent blood co

A:Reference number: A20274; PMID:83308813; PMID:6688526

A:Accession: C20274

A:Molecule type: protein

A:Residues: 58-62, X, 64-68 <MC>

A>Note: the residue designated 'X' was determined to be hydroxyaspartic acid

R:Hase, S.; Kawabata, S.; Nishimura, H.; Takeya, H.; Sueyoshi, T.; Miyata, T.; Iwanaga,

J. Biochem. 104, 867-868, 1988

A:Title: A new triaccharide sugar chain linked to a serine residue in bovine blood coag

A:Reference number: A44556; PMID:8921399; PMID:3149637

A:Accession: A44556

A:Content: annotation

A>Note: structure and location of covalently bound carbohydrate

C:Function:

A:Description: catalyzes the proteolytic activation of coagulation factor X in the prese

gulation factor IX in the presence of calcium and tissue factor

A:Pathway: blood coagulation extrinsic pathway

C:Superfamily: coagulation factor X; EGF homology; Gla domain homology; trypsin homology

C:Keywords: beta-hydroxyaspartic acid; blood coagulation; calcium binding; carboxylat

F:1-152/Product: coagulation factor VIIa light chain #status experimental <MA>

F:1-44/Domain: Gla domain homology (fragment) <GLA>

F:50-81/Domain: EGF homology <EG1>

F:91-127/Domain: EGF homology <EG2>

F:153-407/Product: coagulation factor VIIa heavy chain #status experimental <MA2>

F:153-367/Domain: trypsin homology <TRY>

F:6, 14, 16, 19, 20, 25, 26, 34, 35/Modified site: gamma-carboxyglutamic acid (Glu) #status

F:17-22, 50-61, 55-70, 72-81, 91-102, 98-112, 114-121, 135-262, 159-184, 178-194, 310-329, 340-368/

F:52/Binding site: carboxylate (Ser) (covalent) #status experimental

F:63/Modified site: carboxylate (Ser) (covalent) #status experimental

F:145, 203/Binding site: carboxylate (Asn) (covalent) #status experimental

F:153-153/Cleavage site: Arg-116 (coagulation factor X) #status experimental

F:193, 242, 344/Active site: His, Asp, Ser #status predicted

F:290-291/Cleavage site: Arg-Gly (coagulation factor Xa) #status experimental

Query Match 33.5%; Score 779.5; DB 1; Length 407;

Best Local Similarity 39.6%; Pred. No. 1,2e-49;

Matches 166; Conservative 64; Mismatches 150; Indels 39; Gaps 11;

Qy 1 ANSFLERHSLRECEETEEI CDPEAKETIFONVDTLAFNSKVDGQCVLPLEHPCA 60

Db 1 ANGFLERLPGLSERECREELCSFEENHETIFNERETQFWVSYNQDQ-----AS 52

Qy 61 SLCCGHTCIDIGISFCDSGSGWGRFCQREVS-FLNCSLDNGGCTHCLBEVG-WRC 118

Db 53 SPQNGSGCKDQLQSYICFLPAFEGNCEHFKDOLICVNGGCGEYCSHDHTKTRSC 112

Qy 119 SCAPGYKLDGDLQCHPAVKFPCGRPMKEMKKSHLKRTEDQEDQVDPRLDGMKTR 178

Db 113 RCHGYSLLADGVSCTPVEYPOGK-IPLEKRNA-----SKQGHVGVKVCCK 161

Qy 179 GDSFWQVLLDSSKKKLAGAVLIHPSWVLTAAHCMDSEK---KLIVRLGEYDLRRMEKE 235

Db 162 GECFWQVLLLVNGAQL-CGELLINTWVSAAHCEFDIKKWRRLTAVIGHDLSEHDGDE 220

Qy 226 LDDLIKVEFVHBNYSKSTTNDIALHLAQPATLSQTVIPCLPDSGLARELNQAGQET 295

Db 281 QSRVAVQVLIPEYVGTNNIDIALRLHQPVLTDVVDLCLPETSERTLAFV-RFS 339

Qy 296 LVYWGVSRSREKREKRTVLANFKIPVPHNCESEVN-----SNVSNMLCAGILG 350

Db 340 LVSGWQVLLDRLGANTL-----LEMLVNLVPRLLTDQCLQSRKYGSEPNITRYFCAGYSD 394

Qy 351 DRDAGCGDSGGPMVWSPHGTWFLVGLVSGEGCGLLHNYGVYTKVRYLDMIGHITRDK 410

Db 395 GSKVCKGDSGGPHATHTRGTYLGLVSGGCGATVGHGVYTRVSYTEMQLKMRSE 454

Qy 411 EAP 413

Db 455 PRP 457

Qy 226 LVYWGVSRSREKREKRTVLANFKIPVPHNCESEVN-----SNVSNMLCAGILG 350

Db 280 AVSGWQVLLDRLGANTL-----LEMLVNLVPRLLTDQCLQSRKYGSEPNITRYFCAGYSD 334

Qy 351 DRDAGCGDSGGPMVWSPHGTWFLVGLVSGEGCGLLHNYGVYTKVRYLDMIGHITRDK 410

Db 335 GSKVCKGDSGGPHATHTRGTYLGLVSGGCGATVGHGVYTRVSYTEMQLKMRSE 393

Qy 146932

coagulation factor VII - rabbit

C:Species: Oryctolagus cuniculus (domestic rabbit)

C>Date: 04-Sep-1997 #sequence_revision 04-Sep-1997 #text_change 12-Feb-1999

C:Accession: I46932

R:Brothers, A.B.; Clarke, B.J.; Sheffield, W.P.; Blajchman, M.A.

Thromb. Res. 69, 231-238, 1993

A:Title: Complete nucleotide sequence of the cDNA encoding rabbit coagulation factor VII

A:Reference number: I46932; PMID:93190306; PMID:8383365

A:Accession: I46932

A:Status: preliminary; translated from GE/EMBL/DBJ

A:Molecule type: mRNA

A:Residues: 1-443

A:Cross-references: GB:S56300; NID:9266294; PID:g266295

C:Superfamily: coagulation factor X; EGF homology; Gla domain homology; trypsin homology

F:24-83/Domain: Gla domain homology <GLA>

F:89-120/Domain: EGF homology <EG1>

F:130-166/Domain: EGF homology <EG2>

F:192-425/Domain: trypsin homology <TRY>

Query Match 33.1%; Score 769.5; DB 2; Length 443;

Best Local Similarity 39.7%; Pred. No. 6.8e-49;

Matches 168; Conservative 67; Mismatches 145; Indels 43; Gaps 12;

Qy 1 ANSFLERHSLRECEETEEI CDPEAKETIFONVDTLAFNSKVDGQCVLPLEHPCA 60

Db 40 ANSFLERLPGLSERECREELCSFEENHETIFNERETQFWVSYNQDQ-----AS 93

Qy 61 SLCCGHTCIDIGISFCDSGSGWGRFCQREVS-FLNCSLDNGGCTHCLBEVG-WRC 118

Db 94 --CONGSGCKDQLQSYICFLPAFEGNCEHFKDOLICVNGGCGEYCSHDHTKTRSC 151

Qy 119 SCAPGYKLDGDLQCHPAVKFPCGRPMKEMKKSHLKRTEDQEDQVDPRLDGMKTR 178

Db 152 RCHGYSLLADGVSCTPVEYPOGK-IPLEKRNA-----SKQGHVGVKVCCK 200

Qy 179 GDSFWQVLLDSSKKKLAGAVLIHPSWVLTAAHCMDSEK---KLIVRLGEYDLRRMEKE 235

A:Residues: 1-15 <MTA>
 A:Experimental source: liver
 A>Note: sequence extracted from NCBI backbone (NCBI:93780, NCBI:93787)
 R:Kaul, R.; Hildebrand, B.; Roberts, S.; Jagadeeswaran, P.
 Gene 41, 311-314, 1986
 A:Title: Isolation and characterization of human blood-coagulation factor X cDNA.
 A:Reference number: A25853; MUID:86221713; PMID:3011603
 A:Accession: A25853
 A:Molecule type: mRNA
 A:Residues: 15-284, 'E', 289-488 <RAU>
 A:Cross-references: GB:M22613; NID:g180335; PIDN:AAA1984.1; PID:g180336
 R:Rung, M.R.; Hay, C.W.; MacGillivray, R.T.A.
 Proc Natl Acad Sci U.S.A. 82, 3591-3595, 1985
 A:Title: Characterization of an almost full-length cDNA coding for human blood coagulation factor X.
 A:Reference number: A22208; MUID:85216545; PMID:2582420
 A:Accession: A22208
 A:Molecule type: mRNA
 A:Residues: 13-441, 'S', 443-488 <FUN>
 A:Cross-references: GB:K0194; NID:g182840; PIDN:AAA52490.1; PID:g182841
 R:Reynus, S.P.; Chung, D.W.; Kisiel, W.; Kurachi, K.; Davie, E.W.
 Proc Natl Acad Sci U.S.A. 81, 3699-3702, 1984
 A:Title: Characterization of a cDNA coding for human factor X.
 A:Reference number: A21284; MUID:84222026; PMID:6587384
 A:Accession: A21284
 A:Molecule type: mRNA
 A:Residues: 13-284, 'E', 289-488 <LE2>
 A:Cross-references: GB:K01866
 R:McMillan, B.A.; Fujikawa, K.; Kisiel, W.; Sasagawa, T.; Howald, W.N.; Kwa, B.Y.; Welns
 Biochemistry 22, 2875-2884, 1983
 A:Title: Complete amino acid sequence of the light chain of human blood coagulation factor X.
 A:Reference number: A20362; MUID:83257207; PMID:6871167
 A:Accession: A20362
 A:Molecule type: protein
 A:Residues: 41-179 <MCs>
 R:Inoue, K.; Morita, T.
 Eur J Biochem 218, 153-163, 1993
 A:Title: Identification of O-linked oligosaccharide chains in the activation peptides of human blood coagulation factor X.
 A:Reference number: S39414; MUID:94062825; PMID:8243461
 A:Accession: S39415
 A:Molecule type: protein
 A:Residues: 183-234 <INO>
 A>Note: glycosylation sites
 A>Note: identification and characterization of beta-hydroxyaspartic acid
 R:Jagadeeswaran, P.; Reddy, S.V.; Rao, K.V.; Hamsabhabhanam, K.; Lyman, G.
 Gene 84, 517-519, 1989
 A:Title: Cloning and characterization of the 5' end (exon 1) of the gene encoding human blood coagulation factor X.
 A:Reference number: 154051; MUID:90128299; PMID:2612918
 A:Accession: 154051
 A>Status: translation not shown; translated from GB/EMBL/DBJ
 A:Molecule type: DNA
 A:Residues: 1-23 <RES>
 A:Cross-references: GB:M33297; NID:g183860; PIDN:AAA52636.1; PID:g553330
 R:Padmanabhan, K.; Padmanabhan, K.P.; Tulinsky, A.; Park, C.H.; Bode, W.; Huber, R.; Blad
 J Mol Biol 232, 947-966, 1993
 A:Title: Structure of human des(1-45) factor Xa at 2.2 angstroms resolution.
 A:Reference number: A49458; MUID:93360277; PMID:8355279
 A:Contents: annotation; X-ray crystallography, 2.2 angstroms
 A:Comment: The two chains held together by one disulfide bond are formed from a single-cysteine.
 A:Comment: The activation peptide is cleaved by factor IXa (in the intrinsic pathway) or factor XIa (in the extrinsic pathway).
 C:Comment: The activation peptide is cleaved by factor IXa (in the intrinsic pathway) or factor XIa (in the extrinsic pathway).
 C:Gene: GDB:F10
 A:Cross-references: GDB:118890; OMTM:227600
 A:Map position: 13634-13634
 A:Regions: 24/1, 77/3, 86/1, 124/1, 150/3, 249/3, 289/1
 A>Note: deficiency of this factor causes Stuart disease
 A:Function: catalyzes the proteolytic activation of prothrombin to thrombin in the presence of factor V and calcium ions.
 A:Pathway: blood coagulation
 C:Superfamily: coagulation factor X; EGF homology; Gla domain homology; trypsin homology
 C:Keywords: beta-hydroxyaspartic acid; blood coagulation; calcium binding; carboxylglutamate
 F:1-23/Domain: signal sequence #status predicted <SIG>
 F:24-40/Domain: propeptide #status predicted <PRO>
 F:25-84/Domain: Gla domain homology <GLA>

F:41-179/Product: coagulation factor X light chain #status experimental <LCH>
 F:90-121/Domain: EGF homology <EGF>
 F:129-164/Domain: EGF homology <EG2>
 F:183-488/Product: coagulation factor X heavy chain #status experimental <HCH>
 F:183-234/Domain: activation peptide #status experimental <AP>
 F:235-488/Product: coagulation factor X heavy chain #status experimental <ACT>
 F:235-462/Domain: trypsin homology <TRY>
 F:46,47,54,56,59,60,65,66,69,72,79/Modified site: gamma-carboxylglutamic acid (Glu) #statu
 F:57-62/Disulfide bonds: #status predicted
 F:90-101,95-110,112-121,129-140,136-149,151-164,172-342,241-246,261-277,390-404,415-443/1
 F:103/Modified site: erythro-beta-hydroxyaspartic acid (Asp) #status experimental
 F:119,211/Binding site: carbohydrate (Thr) (covalent) #status experimental
 F:121,231/Binding site: carbohydrate (Asn) (covalent) #status experimental
 F:234-235/Cleavage site: Arg-Tile (coagulation factor IXa, coagulation factor VIIa) #statu
 F:276,322,419/Active site: His, Asp, Ser #status experimental
 Query Match 34.8% Score 809; DB 1; Length 488;
 Best Local Similarity 35.7% Pred. No. 9,8e-52;
 Matches 163; Conservative 87; Mismatches 151; Indels 56; Gaps 9;
 QY 1 ANSFLERHSSLEKEIEICFEBAKEIFQVNDTLAFWSKRVGDCGLVPLEHPCA 60
 DB 41 ANSFLERHSSLEKEIEICFEBAKEIFQVNDTLAFWSKRVGDCGLVPLEHPCA 60
 QY 61 SLCCGHTCIDIGSFSCDCSGMEGRFQGRVSVFNCISLDCGCHYCLCYGMRCSG 120
 DB 95 --CQNGCKCKDGLGEYCTCLGEGKNCCLPTKRL--CSLDNGDCQGFHEQNSVVCSC 151
 QY 121 ARGKGLDLDLCPAVKPCGRPMKMKRSHLKDTEQED-----QVD 167
 DB 152 ARGKGLDLDLCPAVKPCGRPMKMKRSHLKDTEQED-----QVD 167
 QY 152 ARGKGLDLDLCPAVKPCGRPMKMKRSHLKDTEQED-----QVD 167
 DB 168 P-----RLIDKMTRGDSFWQVLLDSKKLACGAVLIHPS 204
 QY 210 PLENPPLDLPNCTOBERGDNILRLIVGQCECKDECPWQALLINEENGFCCGIIISER 269
 DB 205 WTLNACMSKSKLVLGKYDARKEWELDLIKVPHNYSKSTNDMLHLA 264
 QY 270 YTLNACMSKSKLVLGKYDARKEWELDLIKVPHNYSKSTNDMLHLA 264
 DB 265 OPATISQIVICLPDGLAREINLCAQGT-LVTGWSYHSRKRKRNRTVINFTRI 323
 QY 330 PTITFRNVAAPALCPBRMASTL--MTQKTVGSGFRTEKRRQSTR----LKMLEV 382
 DB 324 PVVPRNECSVMSKYSNNELCAGILLDRDACEGDSGPPVASFCTGFLVGVSWGEG 383
 QY 383 PVVPRNECSVMSKYSNNELCAGILLDRDACEGDSGPPVASFCTGFLVGVSWGEG 442
 DB 384 CGLLNYSVTVKSRVLDWIGHIRDEAPQ--KSNAP 419
 QY 443 CARAKGIVTKVTAFLKMLIDRSKTRGLPKAKSHAP 479
 DB
 RESULT 8
 ECKH
 Coagulation factor Xa (EC 3.4.21.6) precursor - chicken
 N:Alternate names: vitru-activating proteinase
 C:Species: Gallus gallus (chicken)
 C:Date: 12-Feb-1993 #sequence revision 07-Feb-1997 #text change 16-Jul-1999
 C:Accession: S15838; S20380; S20381
 R:Sunuki, H.; Harada, A.; Hayashi, Y.; Wada, K.; Asaka, T.; Gotch, B.; Ogasawara, T.; Na
 FEBS Lett 283, 281-285, 1991
 A:Title: Primary structure of the vitru activating proteinase from chick embryo. Its ident
 A:Reference number: S15838; MUID:91573222; PMID:2044767
 A:Accession: S15838
 A:Molecule type: mRNA
 A>Status: not compared with conceptual translation
 A:Residues: 1-475 <SV2>
 A:Cross-references: DBJ:D00844; NID:g222869; PIDN:BA00724.1; PID:g222870
 R:Gotch, B.; Yamuchi, F.; Ogasawara, T.; Nagai, Y.
 FEBS Lett 296, 274-278, 1992
 A:Title: Isolation of factor Xa from chick embryo as the antiotic endoprotease responsib
 A:Reference number: S20380; MUID:92164779; PMID:1537403

Query Match 34.8%; Score 809.5; DB 1; Length 492;
Best local similarity 36.8%; Pred. No. 9,1e-52;
Matches 172; Conservative 72; Mismatches 150; Indels 73; Gaps 13;

F:200/Binding site: sulfate (Tyr) (covalent) (partial) #status experimental
F:208/485/Binding site: carbohydrate (Thr) (covalent) #status experimental
F:218/Binding site: carbohydrate (Asn) (covalent) #status experimental
F:223-234/Cleavage site: Arg-Tle (coagulation factor IXa, coagulation factor VIIa) #statu
F:240-245,260-276,389-403,414-442/Disulfide Bonds: #status experimental
F:275,321,418/Active site: His, Asp, Ser #status predicted

QY 1 ANSFLIEHNSLSEECIEE:CFEEBAKIFQWDDTLAFLWGHVDGQCVLPLEHPCA 60
Db 41 ANSFLIEHNSLSEECIEE:CFEEBAKIFQWDDTLAFLWGHVDGQCVLPLEHPCA 96
QY 61 SLCCGHTCCIDGIFSGDCDSGMBGRFCQ--RRVSLFMSCLDNGCTHYCLEBGMRR 117
Db 97 N----QCHCKDGIQYITCTCAEGEGANCFSTNR-----CSLDNGCDQFCREBSRVR 148
QY 118 CSAPGYKLGDDLLQCHPAVYFPCGR-PWKEKKRSHLRDTE--QEDQVP----- 168
Db 149 CSAGHYVLDGDDSKCVSTERFPCGKFTQGRSRRAHITSEDLADASELEHNDPADLSPT 208
QY 169 -----RLIDKMTREDSHPQWVLLDSKKKLACGAVLHPS 204
Db 209 HSSLDLGLNTEPSAEGDSQGVRTVYGHGDCAEBCQNALVNEBNGFCGCGITNEF 268
QY 205 WYLLAAQMDSESKVLVRLGEYDLRMEKWEJLDLRIKEVPHVPSKSTTDNDIALHLA 264
Db 269 YVLLAAQCHLQARFVAVYGDNRNTEQEGSEMAHVEVTVGSHFVETYPDIDAVLRK 328
QY 265 QPATLSQTIPTICLPDSGLARELNQAGQT-LVGMGTHSREKRAKKNRFVNLFIKI 323
Db 329 TPIRRRNVAAPCLPEKPMARATL--WTQKTIVSQFG---RTHEKRRLSTYKMLEV 381
QY 324 PVVPHNECSFWMNMVNSENMLCAGLIDLRDACAEGDSGGEVWVSFHTWFLVGLVSWMG 383
Db 382 PVDKSTCKLSSFTITRPMFCAYDTQPDPAQGDSDSGPHVTRFMDQYFVAVGIYSWEG 441
QY 384 GGLHNTGYVTKVSRYLDMT-----HGHIKXAPQKSW 417
Db 442 CARKEGVTYTKVSNFLKWKIMKAKAGASRGH--SEAP-ATW 484

RESULT 7
EXHD
coagulation factor Xa (EC 3.4.21.6) precursor [validated] - human
N:Alternate names: Stuart factor
C:Species: Homo sapiens (man)
C:Date: 15-Nov-1984 #sequence revision 02-May-1994 #text change 08-Dec-2000
C:Accession: A24478; J00917; A42485; A25853; A22208; A21284; A20362; S39415; I54054; A006
R:Riley, S.P.; Foster, D.C.; Kurachi, K.; Davie, E.W.
Biochemistry 25, 5098-5102, 1986
A:Title: Gene for human factor X, a blood coagulation factor whose gene organization is
A:Reference number: A24478; M0ID:87026600; PMID:3768336
A:Accession: A24478
A:Molecule type: DNA
A:Residues: 1-488 <LEV>
A:Cross-references: GB:I29433; GB:M4377; NID:8459809; PION:AAA52764.1; PID:g182831
R:Webster, T.U.; Pittman, D.D.; Long, G.L.; Kaufman, R.J.; Church, W.R.
Gene 99, 291-294, 1991
A:Title: Cloning and expression in COS-1 cells of a full-length cDNA encoding human coag
A:Reference number: J00917; M0ID:91216473; PMID:1902434
A:Accession: J00917
A:Molecule type: mRNA
A:Residues: 1-488 <MES>
A:Cross-references: GB:M57285; NID:g182389; PION:AAA52421.1; PID:g182390
R:Miao, C.H.; Leytus, S.P.; Chung, D.W.; Davie, E.W.
J. Biol. Chem. 267, 7395-7401, 1992
A:Title: Liver-specific expression of the gene coding for human factor X, a blood coagul
A:Reference number: A42485; M0ID:92218390; PMID:1313796
A:Accession: A42485
A:Molecule type: DNA

F:183-231/Domain: activation peptide #status predicted <AP1> #status predicted <ACT>
F:232-482/Product: coagulation factor Xa heavy chain #status predicted <F13>
F:232-460/Domain: trypsin homology <TRY>
F:66,47,54,56,59,60,65,66,67,72,79/Modified site: gamma-carboxyglutamic acid (Glu) #status predicted <G1>
F:57-62,90-101,95-110,112-121,129-140,146-149,151-164,172-340,238-243,259-275,388-402,415-420/Modified site: erythro-beta-hydroxyaspartic acid (Asp) #status predicted <A1>
F:103/Modified site: carboxylate (Asn) (covalent) #status predicted <A1>
F:187/Binding site: carboxylate (Thr) (covalent) #status predicted <A1>
F:208/Binding site: carboxylate (Asn) (covalent) #status predicted <A1>
F:218/Binding site: carboxylate (Asn) (covalent) #status predicted <A1>
F:231-232/Cleavage site: Arg-116 (coagulation factor IXa, coagulation factor VIIa) #status predicted <A1>
F:274,320,417/Active site: His, Asp, Ser #status predicted <A1>

Query Match 35.2%; Score 818.5; DB 1; Length 482;
Best Local Similarity 37.0%; Pred. No. 1,9e-52;
Matches 165; Conservative 79; Mismatches 153; Indels 49; Gaps 8;

QY 1 ANSTLEELRHSSLEECIEEFCDFEAKKIPQNVDTLAFKSHGNDQCVLPLEHCA 60
DB 41 ANSPFEERIKKMLEERCVETCSFEERFVFEDNKETTEFNKYEEDQESSP----- 94
QY 61 SLICGHGTCIDIGSGFSCDCSGWEGRCFQREVSFLNCSLDNGCTHYCLEEYGMRCSC 120
DB 95 --CQNGEGCRDGLGSGYCTCTEGSEFGNGLRYRLCSLDNGCQCFQREQNSVWCSC 151
QY 121 APKTKGDDLQCHPAVKFPCGGRPKRMKK-----SHLAKETDEQEDVY----- 167
DB 152 AKGFYGLDDEKSCLSSTAPFPCGKTKRKARASVALNTNSPEPEDLMPDADILYPTESP 211
QY 168 -----PLIIDGKTRRSDSDQWQVLLDSKKKLAAGVALIHSWILT 208
DB 212 SELINLKTPEPANSDDVYIRIVGQEGCKRCEPQWALFSEEDFGCGGTLINERYILT 271
QY 209 AAHQCDSEKTLVRLGEVDLRRMEKMLDILKEVFPVNTSKSTTNDIALHLAQPAT 268
DB 272 AAHCHQAKKFKYRVGDLNTEQEGEMAEVDMIRKANKFQRPDYDPDIAMLEKTPIT 331
QY 269 LSQTVIPICLPDSGLAEFLINQAGETLYTGWGHSSREKAEKRNTPFLNLIKPVPP 327
DB 272 AAHCHQAKKFKYRVGDLNTEQEGEMAEVDMIRKANKFQRPDYDPDIAMLEKTPIT 331
QY 332 FEENVAAPCLPQDMKAEATLMTQKGVISGGRTHREGQSK-----VLKMEVPIYD 384
DB 328 HNECEVSNMNVSENNLCAGILGDRDACBGDSGGPMVASFHGTWFLVGLVSGEGGIL 387
QY 385 RNTCTGLSTGSIITQNNFCGADYAKQBDACQDSCGSHVTRFMDTYFTGLVSGEGCAR 444
DB 388 HNYGYTVKSRYYLDTIGHIRDKAP 413
QY 445 GKGYIKYKTAFLKMLDRSMKARVGP 470

RESULT 6
EXBO
coagulation factor Xa (BC 3.4.21.6) precursor - bovine
N:Alternate names: Stuart factor
C:Species: Bos primigenius taurus (cattle)
C:Date: 24-Apr-1984 #sequence revision: 17-Mar-1987 #text change 16-Jul-1999
C:Accession: A22867; A14997; A12030; A34412; S99414; A00925
R:Func: M.R.; Campbell, R.M.; MacGillivray, T.A.
Nucleic Acids Res. 12, 4481-4492, 1984
A:Title: Blood coagulation factor X mRNA encodes a single polypeptide chain containing a
A:Reference number: A22867; MOID:8424715; PMID:6330671
A:Accession: A22867
A:Molecule type: mRNA
A:Residues: 1487 <FUN>
A:Cross-references: GB:X00673; NID:9192; PIDN:CAA5286.1; PID:9193
R:RefSeq: D.L.; Ericsson, L.H.; Fujikawa, K.; Walsh, K.A.; Neerath, H.; Titani, K.
Biochemistry 19, 659-667, 1980
A:Title: Amino acid sequence of the light chain of bovine factor X-1 (Stuart factor).
A:Reference number: A14997; MOID:80130563; PMID:6766735
A:Accession: A14997
A:Molecule type: protein
A:Residues: 41-102, 'N', 104-180 <ENF>
R:McMullen, B.A.; Fujikawa, K.; Kistiel, W.
Biochem. Biophys. Res. Commun. 115, 8-14, 1983

QY 179 GSPWQVVLDSKKKLACGAVLIHPSWVLPAAHCDMSKCLVRLGETYDLRMEKEWLDL 238
 DB GSPWQVVLDSKKKLACGAVLIHPSWVLPAAHCDMSKCLVRLGETYDLRMEKEWLDL 279
 QY 220 GSPWQVVLDSKKKLACGAVLIHPSWVLPAAHCDMSKCLVRLGETYDLRMEKEWLDL 279
 DB 220 GSPWQVVLDSKKKLACGAVLIHPSWVLPAAHCDMSKCLVRLGETYDLRMEKEWLDL 279
 QY 239 DIKEVFPHPNSKSTNDNDIALHLAQPATLSQTYPTICLPDSGLAEELNQAQGETVLT 298
 DB 239 DIKEVFPHPNSKSTNDNDIALHLAQPATLSQTYPTICLPDSGLAEELNQAQGETVLT 298
 QY 280 DIKEVFPHPNSKSTNDNDIALHLAQPATLSQTYPTICLPDSGLAEELNQAQGETVLT 339
 DB 280 DIKEVFPHPNSKSTNDNDIALHLAQPATLSQTYPTICLPDSGLAEELNQAQGETVLT 339
 QY 299 GNGYSSREKAKRRTFVNFELKIPVPHNECEVSNMNSMNLCAGLIGDQADCEG 358
 DB 340 GNGYSSREKAKRRTFVNFELKIPVPHNECEVSNMNSMNLCAGLIGDQADCEG 395
 QY 359 DSGGPMVAFHGTWELVGLVSWGEGCGLLHNYGYTTKVSRYLTDWIGHIRDEKAPQKSWA 418
 DB 396 DSGGPMVAFHGTWELVGLVSWGEGCGLLHNYGYTTKVSRYLTDWIGHIRDEKAPQKSWA 455
 QY 419 P 419
 DB 456 P 456

RESULT 3

SI18994
 protein C (activated) (EC 3.4.21.69) precursor - rat
 C|Species: Rattus norvegicus (Norway rat)
 C|Date: 10-Sep-1999 #sequence_revision 10-Sep-1999 #text_change 29-Oct-1999
 C|Accession: SI18994; #sequence_revision 10-Sep-1999 #text_change 29-Oct-1999
 R|Okatani, T.; Maekawa, K.; Nawa, K.; Marumoto, Y.
 submitted to the EMBL Data Library, February 1992
 A|Description: The cDNA cloning and mRNA expression of rat protein C.
 A|Reference number: SI18994
 A|Accession: SI18994
 A|Status: preliminary
 A|Molecule type: mRNA
 A|Residues: 1-461 <OKA>
 A|Cross-references: EMBL:X64336; NID:G56962; PIDN:CAA45617.1; PID:G56963
 R|Okatani, T.; Maekawa, K.; Nawa, K.; Marumoto, Y.
 Biochim. Biophys. Acta 1131, 329-332, 1992
 A|Title: The cDNA cloning and mRNA expression of rat protein C.
 A|Reference number: S24312; MUID:92329550; PMID:1627650
 A|Accession: S24312
 A|Status: preliminary
 A|Molecule type: mRNA
 A|Residues: 1-461 <OKA>
 A|Cross-references: EMBL:X64336; NID:G56962; PIDN:CAA45617.1; PID:G56963
 C|Superfamily: coagulation factor X; EGF homology; Gla domain homology; trypsin homology
 C|Keywords: beta-hydroxyaspartic acid; glycoprotein; hydrolase; serine proteinase
 F|1-32/Domain: signal sequence #status predicted <PRO>
 F|27-85/Domain: Gla domain homology <GLA>
 F|33-42/Domain: propeptide #status predicted <PRO>
 F|43-461/Product: protein C #status predicted <PRO>
 F|91-130/Domain: EGF homology <EGF>
 F|139-174/Domain: EGF homology <EG2>
 F|213-445/Domain: trypsin homology <TRY>
 F|47-48-55-57-60-61-66-67-70-76/Modified site: gamma-carboxyglutamic acid (Glu) #status
 F|112/Modified site: erythro-beta-hydroxyaspartic acid (Asp) #status predicted
 F|121-130-139-150-161-174-182-319-238-254-373-387-398-426/Disulfide bonds: #stat
 F|215-299-335/Binding site: carbohydrate (Asn) (covalent) #status predicted
 F|254-300-402/Active site: His, Asp, Ser #status predicted

Query Match 71.2%; Score 1654.5; DB 1; Length 461;
 Best Local Similarity 69.4%; Pred. No. 1e-113;
 Matches 290; Conservative 56; Mismatches 69; Indels 3; Gaps 2;

QY 1 ANSFLEHRSSLRERCEIEICDPEFAKEIFQNVDDTLAFMSKRVNDQCVLPLEHPCA 60
 DB 42 ANSFLEHRSSLRERCEIEICDPEFAKEIFQNVDDTLAFMSKRVNDQCVLPLEHPCA 101
 QY 61 SLCCGHGTCIDIGISFSCDCRSQWEGRFQREVSFLNCSLDNGGCTHYCLDEYGNRSC 120
 DB 102 SPCCGHGTCIDIGISFSCDCRSQWEGRFQREVSFLNCSLDNGGCTHYCLDEYGNRSC 161
 QY 121 APGYKLDLLQCHPAVYFPGCRPWGRMEKRSHLK--DTEDQDQVDPPLIDGRKTR 178

DB 162 APGYELADHNEHCPTNPECGKLMKRRDIDPEDELEIGRIYVGLTITQ 221
 QY 179 GSPWQVVLDSKKKLACGAVLIHPSWVLPAAHCDMSKCLVRLGETYDLRMEKEWLDL 238
 DB 220 GSPWQVVLDSKKKLACGAVLIHPSWVLPAAHCDMSKCLVRLGETYDLRMEKEWLDL 279
 QY 239 DIKEVFPHPNSKSTNDNDIALHLAQPATLSQTYPTICLPDSGLAEELNQAQGETVLT 298
 DB 239 DIKEVFPHPNSKSTNDNDIALHLAQPATLSQTYPTICLPDSGLAEELNQAQGETVLT 298
 QY 280 DIKEVFPHPNSKSTNDNDIALHLAQPATLSQTYPTICLPDSGLAEELNQAQGETVLT 339
 DB 280 DIKEVFPHPNSKSTNDNDIALHLAQPATLSQTYPTICLPDSGLAEELNQAQGETVLT 339
 QY 299 GNGYSSREKAKRRTFVNFELKIPVPHNECEVSNMNSMNLCAGLIGDQADCEG 358
 DB 341 GNGYSSREKAKRRTFVNFELKIPVPHNECEVSNMNSMNLCAGLIGDQADCEG 400
 QY 359 DSGGPMVAFHGTWELVGLVSWGEGCGLLHNYGYTTKVSRYLTDWIGHIRDEKAPQKSWA 418
 DB 401 DSGGPMVAFHGTWELVGLVSWGEGCGLLHNYGYTTKVSRYLTDWIGHIRDEKAPQKSWA 458

RESULT 4

UX0210
 protein C (activated) (EC 3.4.21.69) precursor - mouse
 N|Alternate names: vitamin K-dependent serine proteinase
 C|Species: Mus musculus (house mouse)
 C|Date: 10-Sep-1999 #sequence_revision 10-Sep-1999 #text_change 16-Jun-2000
 C|Accession: UX0210
 R|Tada, N.; Sato, M.; Tsujimura, A.; Iwase, R.; Hashimoto-Gotoh, T.
 J. Biochem. 111, 491-495, 1992
 A|Title: Isolation and characterization of a mouse protein C cDNA.
 A|Reference number: UX0210; MUID:92316897; PMID:1618739
 A|Accession: UX0210
 A|Status: preliminary
 A|Molecule type: mRNA
 A|Residues: 1-461 <TAD>
 A|Cross-references: GB:D10445; NID:G220385; PIDN:BAA01235.1; PID:G220386
 A|Comment: Protein C is the zymogen of the vitamin K-dependent serine proteinase that reg
 B|Superfamily: coagulation factor X; EGF homology; Gla domain homology; trypsin homology
 C|Keywords: beta-hydroxyaspartic acid; blood coagulation; calcium binding; carboxyglutami
 F|1-33/Domain: signal sequence #status predicted <SIG>
 F|27-85/Domain: Gla domain homology <GLA>
 F|34-41/Domain: propeptide #status predicted <PRO>
 F|42-136-139-461/Product: protein C #status predicted <PRO>
 F|42-136/Domain: light chain #status predicted <PCU>
 F|91-130/Domain: EGF homology <EG1>
 F|139-174/Domain: EGF homology <EG2>
 F|199-211/Domain: activation peptide #status predicted <ACT>
 F|212-461/Product: vitamin K-dependent serine proteinase #status predicted <VIT>
 F|47-48-55-57-60-61-66-67-70-76/Modified site: gamma-carboxyglutamic acid (Glu) #status
 F|112/Modified site: erythro-beta-hydroxyaspartic acid (Asp) #status predicted
 F|121-130-139-150-161-174-182-319-238-254-373-387-398-426/Disulfide bonds: #statu
 F|215-299-335/Binding site: carbohydrate (Asn) (covalent) #status predicted
 F|235-299-402/Active site: His, Asp, Ser #status predicted

Query Match 70.6%; Score 1641.5; DB 1; Length 461;
 Best Local Similarity 69.6%; Pred. No. 1e-112;
 Matches 291; Conservative 57; Mismatches 67; Indels 3; Gaps 2;

QY 1 ANSFLEHRSSLRERCEIEICDPEFAKEIFQNVDDTLAFMSKRVNDQCVLPLEHPCA 60
 DB 42 ANSFLEHRSSLRERCEIEICDPEFAKEIFQNVDDTLAFMSKRVNDQCVLPLEHPCA 101
 QY 61 SLCCGHGTCIDIGISFSCDCRSQWEGRFQREVSFLNCSLDNGGCTHYCLDEYGNRSC 120
 DB 102 SPCCGHGTCIDIGISFSCDCRSQWEGRFQREVSFLNCSLDNGGCTHYCLDEYGNRSC 161
 QY 121 APGYKLDLLQCHPAVYFPGCRPWGRMEKRSHLK--DTEDQDQVDPPLIDGRKTR 178
 DB 162 APGYELADHNEHCPTNPECGKLMKRRDIDPEDELEIGRIYVGLTITQ 220

C:Comment: Protein C is synthesized in the liver as a single chain precursor, which is a bin, which cleaves a dodecapeptide from the amino end of the heavy chain, this reaction, C:Genetics:

A:Gene: GDB:PROC

A:Cross-references: GDB:120317; OMIM:176860

A:Map position: 2q13-2q21

A:Introns: 24/1; 79/3; 88/1; 134/1; 179/1; 226/3; 266/1

C:Superfamily: coagulation factor X; EGF homology; Gla domain homology; trypsin homology

C:Keywords: anticoagulant; beta-hydroxyaspartic acid; blood coagulation; calcium binding

F:1-32/Domain: signal sequence #status predicted <Sig>

F:27-86/Domain: Gla domain homology <Gla>

F:33-42/Domain: propeptide #status predicted <PRO>

F:43-197/Product: protein C light chain #status predicted <LCH>

F:92-111/Domain: EGF homology <EGF>

F:140-175/Domain: EGF homology <EG2>

F:200-461/Product: protein C heavy chain #status predicted <HCH>

F:200-211/Domain: activation peptide #status experimental <AP>

F:12-445/Domain: trypsin homology <TRY>

F:48-49,56,58,61,62,67,68,71/Modified site: gamma-carboxyglutamic acid (Glu) #status exp

F:59-64,92-105,101-120,122-131,140-151,147-160,162-175,183-199,238-254,373-387,398-426/D

F:106-111/Disulfide bonds: #status predicted

F:110/Binding site: carboxylate (Thr) (covalent) #status absent

F:113/Modified site: erythro-beta-hydroxyaspartic acid (Asp) #status experimental

F:139,290,355/Binding site: carboxylate (Asn) (covalent) #status experimental

F:211-212/Cleavage site: Arg-Leu (thrombin) #status experimental

F:253,299,402/Active site: His, Asp, Ser #status predicted

F:371/Binding site: carboxylate (Asn) (covalent) (partial) #status atypical

Query Match 100.0%; Score 2224; DB 1; Length 461;
Best Local Similarity 100.0%; Pred. No. 1,1e-162;
Matches 419; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

```

QY 1 ANSFLERHSSLERECIEICDPEAKETPONDVDTLAFWSKXVDGQCLVPLEHPCA 60
DB 43 ANSFLERHSSLERECIEICDPEAKETPONDVDTLAFWSKXVDGQCLVPLEHPCA 102
QY 61 SLCCGHTCTIDIGISFSCDCSGNMGFPQREVSFLNCSLNGGCTHYCLEYGMRCSC 120
DB 103 SLCCGHTCTIDIGISFSCDCSGNMGFPQREVSFLNCSLNGGCTHYCLEYGMRCSC 162
QY 121 APGYKLGDDLLQCHPAVFPQGRPKWMEKRSKSHKXDTDDQDDVDRLDGMTRPG 180
DB 163 APGYKLGDDLLQCHPAVFPQGRPKWMEKRSKSHKXDTDDQDDVDRLDGMTRPG 222
QY 181 SPQOVYLLDSKKKACAGVLIHPSVYLTAAHGMDSKKLVRLGEYDLRMEKEJLDL 240
DB 223 SPQOVYLLDSKKKACAGVLIHPSVYLTAAHGMDSKKLVRLGEYDLRMEKEJLDL 282
QY 241 KEVFNHNSKSTTNDIALHIAQPAITLSQTTVEICLPDGGIAEELNQGCGTLYTGM 300
DB 283 KEVFNHNSKSTTNDIALHIAQPAITLSQTTVEICLPDGGIAEELNQGCGTLYTGM 342
QY 301 GHSSREKEKRRRTFVNFKIPVYHNEGSENNVSNMVLGILLGDGDAACEGDS 360
DB 343 GHSSREKEKRRRTFVNFKIPVYHNEGSENNVSNMVLGILLGDGDAACEGDS 402
QY 361 GGPWVASFHGTNPLVGLVSWGEGGGLHNNVYTVYSRYLDWTHGHIRDKKAPQKSNAP 419
DB 403 GGPWVASFHGTNPLVGLVSWGEGGGLHNNVYTVYSRYLDWTHGHIRDKKAPQKSNAP 461

```

RESULT 2

KRBO

protein C (activated) (EC 3.4.21.69) precursor - bovine (fragment)

Altname: names: autoproteolysis IIA; plasma protein C

C:Date: 30-Nov-1980 #sequence: revision 17-Mar-1987 #text_change 16-Jul-1999

C:Accession: A26250; A18385; A00928

R:Long, G.L.; Balagaje, R.M.; MacGillivray, R.T.A.
Proc. Natl. Acad. Sci. U.S.A. 81, 5653-5656, 1984

A:Title: Cloning and sequence of liver cDNA coding for bovine protein C.
A:Reference number: A26250; NCID:85014825; PMID:6091100
A:Accession: A26250

A:Molecule type: mRNA

A:Residues: 1-456 <LON>

R:Bernlund, P.; Stenflo, J.
J. Biol. Chem. 257, 12170-12179, 1982

A:Title: Amino acid sequence of the light chain of bovine protein C.
A:Reference number: A18385; NCID:83007325; PMID:6896876

A:Accession: A18385

A:Molecule type: protein

A:Residues: 40-194 <FER>

A:Note: 82-Lys was also found
R:Drakenberg, T.; Bernlund, P.; Roepstorff, P.; Stenflo, J.
Proc. Natl. Acad. Sci. U.S.A. 80, 1802-1806, 1983

A:Title: beta-hydroxyaspartic acid in vitamin K-dependent protein C.
A:Reference number: A19316; NCID:83169769; PMID:6572939

A:Contents: annotation; revision to residue 110
R:Stenflo, J.; Bernlund, P.
J. Biol. Chem. 257, 12180-12190, 1982

A:Title: Amino acid sequence of the heavy chain of bovine protein C.
A:Reference number: A18386; NCID:83007326; PMID:6896877

A:Accession: A18386

A:Molecule type: protein

A:Residues: 197-454, 'PV' <STR>

R:Bernlund, N.L.; DeBault, L.E.; Esmon, C.T.
J. Biol. Chem. 258, 5548-5553, 1983

A:Title: Proteolytic formation and properties of gamma-carboxyglutamic acid-domainless p
A:Reference number: A37541; NCID:83213513; PMID:6304092

A:Contents: annotation; activation; calcium binding
R:Johnson, A.E.; Esmon, N.L.; Lane, T.M.; Esmon, C.T.
J. Biol. Chem. 258, 5554-5560, 1983

A:Title: Structural changes required for activation of protein C are induced by Ca2+ bind
A:Reference number: A37542; NCID:83213514; PMID:6406503

A:Contents: annotation; activation; calcium binding
C:Comment: Protein C is the zymogen of the vitamin K-dependent serine proteinase that re

s.
C:Comment: Protein C is synthesized in the liver as a single chain precursor, which is c
bin, which cleaves a tetradecapeptide from the amino end of the heavy chain; this reacti
C:Comment: Calcium binds to the gamma-carboxyglutamic acid (Gla) residues and, with stro
cognition of the thrombin-thrombomodulin complex.

C:Comment: The gamma-carboxyglutamic acid residues arise by a posttranslational, vitamin
C:Superfamily: anticoagulant; beta-hydroxyaspartic acid; blood coagulation; calcium binding

F:1-29/Domain: signal sequence (fragment) #status predicted <Sig>

F:24-83/Domain: Gla domain homology <Gla>

F:30-39/Domain: propeptide #status predicted <PRO>

F:40-194/Product: protein C light chain #status experimental <LCH>

F:98-128/Domain: EGF homology <EG1>

F:137-172/Domain: EGF homology <EG2>

F:197-456/Product: protein C heavy chain #status experimental <HCH>

F:211-210/Domain: activation peptide #status experimental <APT>

F:421-440/Domain: trypsin homology <TRY>

F:445,46,53,55,58,59,62,64,65,68,74/Modified site: gamma-carboxyglutamic acid (Glu) #strati

F:110/Modified site: erythro-beta-hydroxyaspartic acid (Asp) #status experimental

F:113-128,137-148,144-157,159-172,180-318,237-253,368-382,393-421/Disulfide bonds: #strati

F:136,289,350/Binding site: carboxylate (Asn) (covalent) #status predicted

F:252,298,397/Active site: His, Asp, Ser #status predicted

F:366/Binding site: carboxylate (Asn) (covalent) #status predicted

Query Match 71.8%; Score 1668; DB 1; Length 456;
Best Local Similarity 71.3%; Pred. No. 1,1e-114;
Matches 300; Conservative 39; Mismatches 76; Indels 2;

```

QY 1 ANSFLERHSSLERECIEICDPEAKETPONDVDTLAFWSKXVDGQCLVPLEHPCA 60
DB 40 ANSFLERHSSLERECIEICDPEAKETPONDVDTLAFWSKXVDGQCLVPLEHPCA 99
QY 61 SLCCGHTCTIDIGISFSCDCSGNMGFPQREVSFLNCSLNGGCTHYCLEYGMRCSC 120
DB 100 LPPCGAGKCTIDIGISFSCDCSGNMGFPQREVSFLNCSLNGGCTHYCLEYGMRCSC 159
QY 121 APGYKLGDDLLQCHPAVFPQGRPKWMEKRSKSHKXDTDDQDDVDRLDGMTRPG 178
DB 160 APGYKLGDDLLQCHPAVFPQGRPKWMEKRSKSHKXDTDDQDDVDRLDGMTRPG 219

```

GenCore version 5.1.6
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OM protein - protein search, using SW model

Run on: June 2, 2004, 16:53:31 ; Search time 20 Seconds
(without alignments)
2015.212 Million cell updates/sec

Title: US-09-997-623-4
Perfect score: 2324
Sequence: 1 ANSHLEIRHSSLEHCEIE.....LDWIGHIRDKENPKSWAP 419

Scoring table: BLOSUM62
Gapop 10.0 , Gapext 0.5

Searched: 28366 seqs, 96191526 residues

Total number of hits satisfying chosen parameters: 28366

Minimum DB seq length: 0
Maximum DB seq length: 200000000

Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries

Database :
1: p1r1:*
2: p1r2:*
3: p1r3:*
4: p1r4:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Query Match	Length	ID	Description
1	2324	100.0	461	1 KXHU	protein C (activat
2	1668	71.8	456	1 KXBO	protein C (activat
3	1654.5	71.2	461	1 S18994	protein C (activat
4	1641.5	70.6	461	1 UX0210	protein C (activat
5	818.5	35.2	482	1 EXRT	coagulation factor
6	809.5	34.8	492	1 EXHO	coagulation factor
7	809	34.8	488	1 EXHU	coagulation factor
8	801.5	34.5	475	1 EXCH	coagulation factor
9	783	33.7	466	1 KFHU7	coagulation factor
10	779.5	33.5	407	1 KFB07	coagulation factor
11	769.5	33.1	443	1 T46932	coagulation factor
12	763	32.8	452	1 A30351	coagulation factor
13	736	31.7	461	1 KFHU	coagulation factor
14	726	31.2	459	2 J00419	coagulation factor
15	714.5	30.7	416	1 KFB0	coagulation factor
16	562.5	24.2	622	1 TBHU	thrombin (EC 3.4.2
17	538.5	23.2	625	1 TBBO	thrombin (EC 3.4.2
18	533	22.9	618	2 A35827	thrombin (EC 3.4.2
19	525.5	22.6	617	2 S10511	thrombin (EC 3.4.2
20	473.5	20.4	655	1 A46688	heparocyte growth
21	468	20.1	422	1 KXHUZ	plasma protein Z p
22	448	19.3	396	1 KXBOZ	plasma protein Z
23	427	18.4	271	2 T46580	factor IX - pig. (f
24	426	18.3	638	1 KQMSPL	plasma kallikrein
25	424.5	18.3	638	1 KQHUP	plasma kallikrein
26	420.5	18.1	699	1 T54763	Ra-reactive factor
27	420	18.1	275	2 T46712	factor IX - rabbit
28	419	18.0	625	1 KFHU1	coagulation factor
29	418.5	18.0	855	2 JC7731	membrane-bound arg

30	417	17.9	285	2 T48144	coagulation factor
31	414	17.8	638	1 KQRTPL	plasma kallikrein
32	412	17.7	812	1 PLMS	plasma (EC 3.4.21
33	410.5	17.7	275	2 C35863	trypsin (EC 3.4.2
34	410	17.6	560	1 J04795	plasma hyaluronan-
35	410	17.6	810	1 PLHU	plasmin (EC 3.4.21
36	409.5	17.6	282	2 T46621	coagulation factor
37	404.5	17.4	275	2 A35863	trypsin (EC 3.4.2
38	403.5	17.4	275	2 B35863	trypsin (EC 3.4.2
39	403	17.3	274	2 J04171	trypsin (EC 3.4.2
40	403	17.3	583	2 A29154	complement factor
41	402	17.3	246	2 B25528	trypsin (EC 3.4.21
42	400.5	17.2	246	2 J04171	trypsin (EC 3.4.21
43	400	17.2	239	2 G42696	thrombin (EC 3.4.2
44	400	17.2	810	2 B30848	plasmin (EC 3.4.21
45	399.5	17.2	231	1 TRPQTR	trypsin (EC 3.4.21

ALIGNMENTS

RESULT 1

KXHU
protein C (activated) (EC 3.4.21.69) precursor - human
N;Alternate names: autoprothrombin IIA; plasma protein C
C;Species: Homo sapiens (man)
C;Date: 17-Mar-1987 #sequence revision 17-Mar-1987 #ext_change 16-Jul-1999
C;Accession: A22331; A25426; A21781; A23789; A00927
R;Poster: D.C.; Yoshitake, S.; Davie, E.W.
Proc. Natl. Acad. Sci. U.S.A. 82, 4673-4677, 1985
A;Title: The nucleotide sequence of the gene for human protein C.
A;Reference number: A22331; MUID:85270390; PMID:2991887
A;Accession: A22331
A;Molecule type: DNA
A;Residues: 1-461 <POS1>
A;Cross-references: GB:M1228; NID:g190333; PIDN:AAA60166.1; PID:g190334
R;Plutsky, J.; Hoskins, J.A.; Long, G.L.; Crabtree, G.R.
Proc. Natl. Acad. Sci. U.S.A. 83, 546-550, 1986
A;Title: Evolution and organization of the human protein C gene.
A;Reference number: A25426; MUID:86120978; PMID:3511471
A;Accession: A25426
A;Molecule type: DNA
A;Residues: 1-445, 'U', 446-461 <EU>
A;Cross-references: GB:M12712; NID:g190330; PIDN:AAA60165.1; PID:g190332
R;Poster, D.; Davie, E.W.
Proc. Natl. Acad. Sci. U.S.A. 81, 4766-4770, 1984
A;Title: Characterization of a cDNA coding for human protein C.
A;Reference number: A21781; MUID:84272714; PMID:6589623
A;Accession: A21781
A;Molecule type: mRNA
A;Residues: 'Q', 107-461 <POS2>
A;Cross-references: GB:K02059; NID:g190322; PIDN:AAA60164.1; PID:g190323
R;Beckman, R.J.; Schmidt, R.J.; Santeirre, R.F.; Plutsky, J.; Crabtree, G.R.; Long, G.L.
Nucleic Acids Res. 13, 5233-5247, 1985
A;Title: The structure and evolution of a 461 amino acid human protein C precursor and its
A;Reference number: A23789; MUID:86269639; PMID:2991889
A;Accession: A23789
A;Molecule type: mRNA
A;Residues: 1-461 <POS3>
A;Cross-references: GB:X02750; NID:g35689; PIDN:CMA26528.1; PID:g763120
R;Malletich, U.P.; Broze Jr., G.J.
U. Biol. Chem. 265, 11397-11404, 1990
A;Title: Beta protein C is not glycosylated at asparagine 329. The rate of translation me
A;Reference number: A44605; MUID:90293094; PMID:1694179
A;Contents: annotation; carbohydrate binding sites; activation peptide
A;Note: the alpha form of protein C is glycosylated at Asn-329, and the beta form is not
R;Harris, R.J.; Ling, V.T.; Spellman, M.W.
U. Biol. Chem. 267, 5102-5107, 1992
A;Title: O-linked fucose is present in the first epidermal growth factor domain of factor
A;Reference number: A44606; MUID:92184750; PMID:1544894
A;Contents: annotation; beta-hydroxyaspartic acid
A;Comment: protein C is the zymogen of the vitamin K-dependent serine proteinase that in
ivation of factor Va is strongly enhanced by complexing with protein S. Protein C also fe

; CURRENT FILING DATE: 2002-07-22
 ; PRIOR APPLICATION NUMBER: 60/181948
 ; PRIOR FILING DATE: 2002-02-11
 ; PRIOR APPLICATION NUMBER: 60/189199
 ; PRIOR FILING DATE: 2000-03-14
 ; NUMBER OF SEQ ID NOS: 12
 ; SOFTWARE: PatentIn version 3.1
 ; SEQ ID NO 3
 ; LENGTH: 419
 ; TYPE: PRT
 ; ORGANISM: Homo sapiens
 US-10-182-263-3

Query Match 98.5%; Score 2290; DB 14; Length 419;
 Best Local Similarity 98.6%; Pred. No. 3e-187;
 Matches 413; Conservative 2; Mismatches 4; Indels 0; Gaps 0;

QY	1	ANSFLEELRHSLERECEIEICDPEEAKETFEQVDDTLAFMSKAVDGDQCLVLEHPCA	60
DB	1	ANSFLEELRHSLERECEIEICDPEEAKETFEQVDDTLAFMSKAVDGDQCLVLEHPCA	60
QY	61	SLCCGHCICIDIGSFSCDCSGWGRPCGRPVKMEKRSKSLKRDTEDEQDQVDFRLIKGKTRRGD	120
DB	61	SLCCGHCICIDIGSFSCDCSGWGRPCGRPVKMEKRSKSLKRDTEDEQDQVDFRLIKGKTRRGD	120
QY	121	APGYLGDGDLQCHPAVKEPCGRPVKMEKRSKSLKRDTEDEQDQVDFRLIKGKTRRGD	180
DB	121	APGYLGDGDLQCHPAVKEPCGRPVKMEKRSKSLKRDTEDEQDQVDFRLIKGKTRRGD	180
QY	181	SPWQVVLDSKKKLAGAVLHESVTLTAHCDDESKLLVRLGEYDLRMEKELDDI	240
DB	181	SPWQVVLDSKKKLAGAVLHESVTLTAHCDDESKLLVRLGEYDLRMEKELDDI	240
QY	241	KEVFPHPVYSSTTDNDIALHLAOPATLSOTIVPICLPDSGLARELNOAGQETLVYTW	300
DB	241	KEVFPHPVYSSTTDNDIALHLAOPATLSOTIVPICLPDSGLARELNOAGQETLVYTW	300
QY	301	GYHSSREKAKRNRTFVLFNFIKIPVPHNECSYVMSNVSNNMLCAGILGDRQDAEGDS	360
DB	301	GYHSSREKAKRNRTFVLFNFIKIPVPHNECSYVMSNVSNNMLCAGILGDRQDAEGDS	360
QY	361	GGPMYASTHGTWFLVGLVSNWGGCGLLANTGTTKYSKYLDPWTHGHTRDEKAPQKSWAP	419
DB	361	GGPMYASTHGTWFLVGLVSNWGGCGLLANTGTTKYSKYLDPWTHGHTRDEKAPQKSWAP	419

Search completed: June 2, 2004, 16:59:14
 Job time : 50 secs

QY 61 SLCCGHTCIDIGISFSCDCRSWEGRCQREVPNLNCSLDNGCCTHYCLEBWMRCSC 120
DB 61 SLCCGHTCIDIGISFSCDCRSWEGRCQREVPNLNCSLDNGCCTHYCLEBWMRCSC 120
QY 121 APGYKGDLLQCHPAVYPCGPRPKMEKRSKSLKEDTDEDDQVPRLLDGKMTRRGD 180
DB 121 APGYKGDLLQCHPAVYPCGPRPKMEKRSKSLKEDTDEDDQVPRLLDGKMTRRGD 180
QY 181 SPQVYVLLDSKKKLAAGAVLHPSWVLTAAHCHWDSKSLVRLGEYDLRWEKWEILDID 240
DB 181 SPQVYVLLDSKKKLAAGAVLHPSWVLTAAHCHWDSKSLVRLGEYDLRWEKWEILDID 240
QY 241 KEVYVHPNYSKSTTNDIALHLAOPATLSQTIIVPICLPDGLABRELNOAGQETLVYTWG 300
DB 241 KEVYVHPNYSKSTTNDIALHLAOPATLSQTIIVPICLPDGLABRELNOAGQETLVYTWG 300
QY 301 GYHSREKAKRNRTFVNLFIKIPVPHNECEVMSNMVSENNLCAGILGRDQACEGDS 360
DB 301 GYHSREKAKRNRTFVNLFIKIPVPHNECEVMSNMVSENNLCAGILGRDQACEGDS 360
QY 361 GGPVWASFHGTWFLVGLVSWGCGLLHNYGVYTKVSRYLDMHGHIRDXEAPQKSWAP 419
DB 361 GGPVWASFHGTWFLVGLVSWGCGLLHNYGVYTKVSRYLDMHGHIRDXEAPQKSWAP 419

RESULT 13

US-10-182-263-5
; Sequence 5, Application US/10182263
; Publication No. US20030022354A1
; GENERAL INFORMATION:
; APPLICANT: Gerlitz, Bruce E
; APPLICANT: Jones, Bryan E
; APPLICANT: Grinnell, Brian W
; TITLE OF INVENTION: PROTEIN C DERIVATIVES
; FILE REFERENCE: X-13611
; CURRENT APPLICATION NUMBER: US/10/182,263
; CURRENT FILING DATE: 2002-07-22
; PRIOR APPLICATION NUMBER: 60/181948
; PRIOR FILING DATE: 2002-02-11
; PRIOR APPLICATION NUMBER: 60/189199
; PRIOR FILING DATE: 2000-03-14
; NUMBER OF SEQ ID NOS: 12
; SOFTWARE: PatentIn version 3.1
; SEQ ID NO 5
; LENGTH: 419
; TYPE: PRT
; ORGANISM: Homo sapiens
US-10-182-263-5

Query Match 98.8%; Score 2296; DB 14; Length 419;

Best Local Similarity 98.8%; Pred. No. 9,3e-188;

Matches 414; Conservative 2; Mismatches 3; Indels 0; Gaps 0;

QY 1 ANSFLELRHSLSRECEIEICDFEAKEIFQNVDDTLAFWSKGVDDQCVLPLEHPCA 60
DB 1 ANSFLELRHSLSRECEIEICDFEAKEIFQNVDDTLAFWSKGVDDQCVLPLEHPCA 60
QY 61 SLCCGHTCIDIGISFSCDCRSWEGRCQREVPNLNCSLDNGCCTHYCLEBWMRCSC 120
DB 61 SLCCGHTCIDIGISFSCDCRSWEGRCQREVPNLNCSLDNGCCTHYCLEBWMRCSC 120
QY 121 APGYKGDLLQCHPAVYPCGPRPKMEKRSKSLKEDTDEDDQVPRLLDGKMTRRGD 180
DB 121 APGYKGDLLQCHPAVYPCGPRPKMEKRSKSLKEDTDEDDQVPRLLDGKMTRRGD 180
QY 181 SPQVYVLLDSKKKLAAGAVLHPSWVLTAAHCHWDSKSLVRLGEYDLRWEKWEILDID 240
DB 181 SPQVYVLLDSKKKLAAGAVLHPSWVLTAAHCHWDSKSLVRLGEYDLRWEKWEILDID 240
QY 241 KEVYVHPNYSKSTTNDIALHLAOPATLSQTIIVPICLPDGLABRELNOAGQETLVYTWG 300
DB 241 KEVYVHPNYSKSTTNDIALHLAOPATLSQTIIVPICLPDGLABRELNOAGQETLVYTWG 300

QY 301 GYHSREKAKRNRTFVNLFIKIPVPHNECEVMSNMVSENNLCAGILGRDQACEGDS 360
DB 301 GYHSREKAKRNRTFVNLFIKIPVPHNECEVMSNMVSENNLCAGILGRDQACEGDS 360
QY 361 GGPVWASFHGTWFLVGLVSWGCGLLHNYGVYTKVSRYLDMHGHIRDXEAPQKSWAP 419
DB 361 GGPVWASFHGTWFLVGLVSWGCGLLHNYGVYTKVSRYLDMHGHIRDXEAPQKSWAP 419

RESULT 14

US-10-168-407-6
; Sequence 6, Application US/10168407
; Publication No. US20030207435A1
; GENERAL INFORMATION:
; APPLICANT: Gerlitz, Bruce E
; APPLICANT: Jones, Bryan E
; APPLICANT: Grinnell, Brian W
; TITLE OF INVENTION: PROTEIN C DERIVATIVES
; FILE REFERENCE: X-13610
; CURRENT APPLICATION NUMBER: US/10/168,407
; CURRENT FILING DATE: 2002-11-04
; NUMBER OF SEQ ID NOS: 12
; SOFTWARE: PatentIn version 3.1
; SEQ ID NO 6
; LENGTH: 419
; TYPE: PRT
; ORGANISM: Homo sapiens
US-10-168-407-6

Query Match 98.7%; Score 2294; DB 15; Length 419;

Best Local Similarity 98.6%; Pred. No. 1.4e-187;

Matches 413; Conservative 3; Mismatches 3; Indels 0; Gaps 0;

QY 1 ANSFLELRHSLSRECEIEICDFEAKEIFQNVDDTLAFWSKGVDDQCVLPLEHPCA 60
DB 1 ANSFLELRHSLSRECEIEICDFEAKEIFQNVDDTLAFWSKGVDDQCVLPLEHPCA 60
QY 61 SLCCGHTCIDIGISFSCDCRSWEGRCQREVPNLNCSLDNGCCTHYCLEBWMRCSC 120
DB 61 SLCCGHTCIDIGISFSCDCRSWEGRCQREVPNLNCSLDNGCCTHYCLEBWMRCSC 120
QY 121 APGYKGDLLQCHPAVYPCGPRPKMEKRSKSLKEDTDEDDQVPRLLDGKMTRRGD 180
DB 121 APGYKGDLLQCHPAVYPCGPRPKMEKRSKSLKEDTDEDDQVPRLLDGKMTRRGD 180
QY 181 SPQVYVLLDSKKKLAAGAVLHPSWVLTAAHCHWDSKSLVRLGEYDLRWEKWEILDID 240
DB 181 SPQVYVLLDSKKKLAAGAVLHPSWVLTAAHCHWDSKSLVRLGEYDLRWEKWEILDID 240
QY 241 KEVYVHPNYSKSTTNDIALHLAOPATLSQTIIVPICLPDGLABRELNOAGQETLVYTWG 300
DB 241 KEVYVHPNYSKSTTNDIALHLAOPATLSQTIIVPICLPDGLABRELNOAGQETLVYTWG 300
QY 301 GYHSREKAKRNRTFVNLFIKIPVPHNECEVMSNMVSENNLCAGILGRDQACEGDS 360
DB 301 GYHSREKAKRNRTFVNLFIKIPVPHNECEVMSNMVSENNLCAGILGRDQACEGDS 360
QY 361 GGPVWASFHGTWFLVGLVSWGCGLLHNYGVYTKVSRYLDMHGHIRDXEAPQKSWAP 419
DB 361 GGPVWASFHGTWFLVGLVSWGCGLLHNYGVYTKVSRYLDMHGHIRDXEAPQKSWAP 419

RESULT 15

US-10-182-263-3
; Sequence 3, Application US/10182263
; Publication No. US20030022354A1
; GENERAL INFORMATION:
; APPLICANT: Gerlitz, Bruce E
; APPLICANT: Jones, Bryan E
; APPLICANT: Grinnell, Brian W
; TITLE OF INVENTION: PROTEIN C DERIVATIVES
; FILE REFERENCE: X-13611
; CURRENT APPLICATION NUMBER: US/10/182,263

QY 241 KEVFNHNSKSTTNDIALALHQAATLSQTTVEICLPDSGLAEELNQAQGETLVYGM 300
 DB 241 KEVFNHNSKSTTNDIALALHQAATLSQTTVEICLPDSGLAEELNQAQGETLVYGM 300
 QY 301 GHSSREKAKRNTFVNFIKIYVPHNECESEVSNMVCAGILGDRQACGDS 360
 DB 301 GHSSREKAKRNTFVNFIKIYVPHNECESEVSNMVCAGILGDRQACGDS 360
 QY 361 GGPWVASFHGTWFLVGLVSWGSCGLHNYGYTKSRYLDMHGHIRDKXAPQKSNAP 419
 DB 361 GGPWVASFHGTWFLVGLVSWGSCGLHNYGYTKSRYLDMHGHIRDKXAPQKSNAP 419

RESULT 10

US-10-168-407-4
 ; Sequence 4, Application US/10168407
 ; Publication No. US20030207435A1
 ; GENERAL INFORMATION:
 ; APPLICANT: Gerlitz, Bruce E
 ; APPLICANT: Jones, Bryan E
 ; TITLE OF INVENTION: PROTEIN C DERIVATIVES
 ; FILE REFERENCE: X-13610
 ; CURRENT APPLICATION NUMBER: US/10/168,407
 ; CURRENT FILING DATE: 2002-11-04
 ; NUMBER OF SEQ ID NOS: 12
 ; SOFTWARE: PatentIn version 3.1
 ; SEQ ID NO 4
 ; LENGTH: 419
 ; TYPE: PRT
 ; ORGANISM: Homo sapiens
 US-10-168-407-4

Query Match 99.1%; Score 2302; DB 15; Length 419;
 Best Local Similarity 98.8%; Pred. No. 2, 9e-188;
 Matches 414; Conservative 3; Mismatches 2; Indels 0; Gaps 0;

QY 1 ANSFLELRHSLRECEIEICDFEAKETIFQVNDTLAFMSKHVDQCLVPLEHPCA 60
 DB 1 ANSFLELRHSLRECEIEICDFEAKETIFEDVDTLAFMSKHVDQCLVPLEHPCA 60
 QY 61 SLCCGHTCIDIGISFSCDCRSGBGRFCQREVSFLNCSLNGGCTHYCLEEVGMRRCSG 120
 DB 61 SLCCGHTCIDIGISFSCDCRSGBGRFCQREVSFLNCSLNGGCTHYCLEEVGMRRCSG 120
 QY 121 APGYKLGDDLQCHPAVKFPCGRPWKMEKKRSHLRKDTEDQDVDPRLIDGKMTREGD 180
 DB 121 APGYKLGDDLQCHPAVKFPCGRPWKMEKKRSHLRKDTEDQDVDPRLIDGKMTREGD 180
 QY 181 SPQOVVLLDSKKKLAGCAVLIHPSVLTAAHCHDSKLLVTLGEYDLRREKWELELDI 240
 DB 181 SPQOVVLLDSKKKLAGCAVLIHPSVLTAAHCHDSKLLVTLGEYDLRREKWELELDI 240
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 QY 301 GHSSREKAKRNTFVNFIKIYVPHNECESEVSNMVCAGILGDRQACGDS 360
 DB 301 GHSSREKAKRNTFVNFIKIYVPHNECESEVSNMVCAGILGDRQACGDS 360
 QY 361 GGPWVASFHGTWFLVGLVSWGSCGLHNYGYTKSRYLDMHGHIRDKXAPQKSNAP 419
 DB 361 GGPWVASFHGTWFLVGLVSWGSCGLHNYGYTKSRYLDMHGHIRDKXAPQKSNAP 419

RESULT 11

US-10-670-628-2
 ; Sequence 2, Application US/10670628
 ; Publication No. US20040038288A1
 ; GENERAL INFORMATION:
 ; APPLICANT: Huang, Lihua
 ; APPLICANT: Riggan, Ralph M
 ; TITLE OF INVENTION: HUMAN PROTEIN C POLYPEPTIDE

FILE REFERENCE: X-12279
 ; CURRENT APPLICATION NUMBER: US/10/670,628
 ; CURRENT FILING DATE: 2003-09-25
 ; NUMBER OF SEQ ID NOS: 2
 ; SOFTWARE: PatentIn version 3.1
 ; SEQ ID NO 2
 ; LENGTH: 415
 ; TYPE: PRT
 ; ORGANISM: Artificial Sequence
 ; FEATURE:
 ; OTHER INFORMATION: Description of Artificial Sequence: recombinant human protein c
 ; OTHER INFORMATION: truncated at C-terminus
 US-10-670-628-2

Query Match 98.9%; Score 2298; DB 12; Length 415;
 Best Local Similarity 100.0%; Pred. No. 6, 2e-188;
 Matches 415; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 ANSFLELRHSLRECEIEICDFEAKETIFQVNDTLAFMSKHVDQCLVPLEHPCA 60
 DB 1 ANSFLELRHSLRECEIEICDFEAKETIFEDVDTLAFMSKHVDQCLVPLEHPCA 60
 QY 61 SLCCGHTCIDIGISFSCDCRSGBGRFCQREVSFLNCSLNGGCTHYCLEEVGMRRCSG 120
 DB 61 SLCCGHTCIDIGISFSCDCRSGBGRFCQREVSFLNCSLNGGCTHYCLEEVGMRRCSG 120
 QY 121 APGYKLGDDLQCHPAVKFPCGRPWKMEKKRSHLRKDTEDQDVDPRLIDGKMTREGD 180
 DB 121 APGYKLGDDLQCHPAVKFPCGRPWKMEKKRSHLRKDTEDQDVDPRLIDGKMTREGD 180
 QY 181 SPQOVVLLDSKKKLAGCAVLIHPSVLTAAHCHDSKLLVTLGEYDLRREKWELELDI 240
 DB 181 SPQOVVLLDSKKKLAGCAVLIHPSVLTAAHCHDSKLLVTLGEYDLRREKWELELDI 240
 QY 241 KEVFNHNSKSTTNDIALALHQAATLSQTTVEICLPDSGLAEELNQAQGETLVYGM 300
 DB 241 KEVFNHNSKSTTNDIALALHQAATLSQTTVEICLPDSGLAEELNQAQGETLVYGM 300
 QY 301 GHSSREKAKRNTFVNFIKIYVPHNECESEVSNMVCAGILGDRQACGDS 360
 DB 301 GHSSREKAKRNTFVNFIKIYVPHNECESEVSNMVCAGILGDRQACGDS 360
 QY 361 GGPWVASFHGTWFLVGLVSWGSCGLHNYGYTKSRYLDMHGHIRDKXAPQK 415
 DB 361 GGPWVASFHGTWFLVGLVSWGSCGLHNYGYTKSRYLDMHGHIRDKXAPQK 415

RESULT 12

US-10-168-407-5
 ; Sequence 5, Application US/10168407
 ; Publication No. US20030207435A1
 ; GENERAL INFORMATION:
 ; APPLICANT: Gerlitz, Bruce E
 ; APPLICANT: Jones, Bryan E
 ; TITLE OF INVENTION: PROTEIN C DERIVATIVES
 ; FILE REFERENCE: X-13610
 ; CURRENT APPLICATION NUMBER: US/10/168,407
 ; CURRENT FILING DATE: 2002-11-04
 ; NUMBER OF SEQ ID NOS: 12
 ; SOFTWARE: PatentIn version 3.1
 ; SEQ ID NO 5
 ; LENGTH: 419
 ; TYPE: PRT
 ; ORGANISM: Homo sapiens
 US-10-168-407-5

Query Match 98.9%; Score 2298; DB 15; Length 419;
 Best Local Similarity 98.8%; Pred. No. 6, 3e-188;
 Matches 414; Conservative 2; Mismatches 3; Indels 0; Gaps 0;

QY 1 ANSFLELRHSLRECEIEICDFEAKETIFQVNDTLAFMSKHVDQCLVPLEHPCA 60
 DB 1 ANSFLELRHSLRECEIEICDFEAKETIFEDVDTLAFMSKHVDQCLVPLEHPCA 60


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; Sequence 2, Application US/10182263
; Publication No. US20030022354A1
; GENERAL INFORMATION:
; APPLICANT: Gerlitz, Bruce E
; APPLICANT: Jones, Bryan E
; APPLICANT: Grinnell, Brian W
; TITLE OF INVENTION: PROTEIN C DERIVATIVES
; FILE REFERENCE: X-13611
; CURRENT APPLICATION NUMBER: US/10/182,263
; CURRENT FILING DATE: 2002-07-22
; PRIOR APPLICATION NUMBER: 60/181948
; PRIOR FILING DATE: 2002-02-11
; PRIOR APPLICATION NUMBER: 60/189199
; PRIOR FILING DATE: 2000-03-14
; NUMBER OF SEQ ID NOS: 12
; SOFTWARE: PatentIn version 3.1
; SEQ ID NO 2
; LENGTH: 461
; TYPE: PRT
; ORGANISM: Homo sapiens
US-10-182-263-2
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Query Match 100.0%; Score 2324; DB 14; Length 461;
Best Local Similarity 100.0%; Pred. No. 4.2e-190;
Matches 419; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
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DB 43 ANSFLEIRHSSLEBCEIEICDFEAKETIFQNVDDTLAFMSKRVGQDQCLVPLEHPCA 102
QY 61 SLCCGHTCIDIGSFSCDCRSGBGRFCQREVSFLNCSLDNGGCTHYCLEEVGRRCSC 120
DB 103 SLCCGHTCIDIGSFSCDCRSGBGRFCQREVSFLNCSLDNGGCTHYCLEEVGRRCSC 162
QY 121 APGYKGDLLQCHPAVYFPCGRPMKMEKRSKSHKRDTEQDQDVDPRLIDGKTRRGD 180
DB 163 APGYKGDLLQCHPAVYFPCGRPMKMEKRSKSHKRDTEQDQDVDPRLIDGKTRRGD 222
QY 181 SPQVVLDSKKKLAAGAVLIHPSWVLTAAHOMDESKKLVRLGEYDLRREKWEELDDI 240
DB 223 SPQVVLDSKKKLAAGAVLIHPSWVLTAAHOMDESKKLVRLGEYDLRREKWEELDDI 282
QY 241 KEVFNHNTSKSTTNDIALHLAOPATLSQTIYVICLPDGLARELNQAGETLVYTW 300
DB 283 KEVFNHNTSKSTTNDIALHLAOPATLSQTIYVICLPDGLARELNQAGETLVYTW 342
QY 301 GYHSSREKAKNRKTFVNLFIKIPVYPNECSEVMSNVSNNMLCAGILGDRDACEGDS 360
DB 343 GYHSSREKAKNRKTFVNLFIKIPVYPNECSEVMSNVSNNMLCAGILGDRDACEGDS 402
QY 361 GGPWVAFHGTWFLVGLVSWGEGGLHNYGYTAKSRVYDMLHGHIRKKEAPQKSWAP 419
DB 403 GGPWVAFHGTWFLVGLVSWGEGGLHNYGYTAKSRVYDMLHGHIRKKEAPQKSWAP 461
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RESULT 8

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US-10-168-407-2
; Sequence 2, Application US/10168407
; Publication No. US20030207435A1
; GENERAL INFORMATION:
; APPLICANT: Gerlitz, Bruce E
; APPLICANT: Jones, Bryan E
; TITLE OF INVENTION: PROTEIN C DERIVATIVES
; FILE REFERENCE: X-13610
; CURRENT APPLICATION NUMBER: US/10/168,407
; CURRENT FILING DATE: 2002-11-04
; NUMBER OF SEQ ID NOS: 12
; SOFTWARE: PatentIn version 3.1
; SEQ ID NO 2
; LENGTH: 461
; TYPE: PRT
; ORGANISM: Homo sapiens
US-10-168-407-2
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Query Match 100.0%; Score 2324; DB 15; Length 461;
Best Local Similarity 100.0%; Pred. No. 4.2e-190;
Matches 419; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
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DB 43 ANSFLEIRHSSLEBCEIEICDFEAKETIFQNVDDTLAFMSKRVGQDQCLVPLEHPCA 102
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DB 103 SLCCGHTCIDIGSFSCDCRSGBGRFCQREVSFLNCSLDNGGCTHYCLEEVGRRCSC 162
QY 121 APGYKGDLLQCHPAVYFPCGRPMKMEKRSKSHKRDTEQDQDVDPRLIDGKTRRGD 180
DB 163 APGYKGDLLQCHPAVYFPCGRPMKMEKRSKSHKRDTEQDQDVDPRLIDGKTRRGD 222
QY 181 SPQVVLDSKKKLAAGAVLIHPSWVLTAAHOMDESKKLVRLGEYDLRREKWEELDDI 240
DB 223 SPQVVLDSKKKLAAGAVLIHPSWVLTAAHOMDESKKLVRLGEYDLRREKWEELDDI 282
QY 241 KEVFNHNTSKSTTNDIALHLAOPATLSQTIYVICLPDGLARELNQAGETLVYTW 300
DB 283 KEVFNHNTSKSTTNDIALHLAOPATLSQTIYVICLPDGLARELNQAGETLVYTW 342
QY 301 GYHSSREKAKNRKTFVNLFIKIPVYPNECSEVMSNVSNNMLCAGILGDRDACEGDS 360
DB 343 GYHSSREKAKNRKTFVNLFIKIPVYPNECSEVMSNVSNNMLCAGILGDRDACEGDS 402
QY 361 GGPWVAFHGTWFLVGLVSWGEGGLHNYGYTAKSRVYDMLHGHIRKKEAPQKSWAP 419
DB 403 GGPWVAFHGTWFLVGLVSWGEGGLHNYGYTAKSRVYDMLHGHIRKKEAPQKSWAP 461
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RESULT 9

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US-10-168-407-3
; Sequence 3, Application US/10168407
; Publication No. US20030207435A1
; GENERAL INFORMATION:
; APPLICANT: Gerlitz, Bruce E
; APPLICANT: Jones, Bryan E
; TITLE OF INVENTION: PROTEIN C DERIVATIVES
; FILE REFERENCE: X-13610
; CURRENT APPLICATION NUMBER: US/10/168,407
; CURRENT FILING DATE: 2002-11-04
; NUMBER OF SEQ ID NOS: 12
; SOFTWARE: PatentIn version 3.1
; SEQ ID NO 3
; LENGTH: 419
; TYPE: PRT
; ORGANISM: Homo sapiens
US-10-168-407-3
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Query Match 99.2%; Score 2306; DB 15; Length 419;
Best Local Similarity 99.0%; Pred. No. 1.3e-188;
Matches 415; Conservative 2; Mismatches 2; Indels 0; Gaps 0;
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DB 1 ANSFLEIRHSSLEBCEIEICDFEAKETIFQNVDDTLAFMSKRVGQDQCLVPLEHPCA 60
QY 61 SLCCGHTCIDIGSFSCDCRSGBGRFCQREVSFLNCSLDNGGCTHYCLEEVGRRCSC 120
DB 61 SLCCGHTCIDIGSFSCDCRSGBGRFCQREVSFLNCSLDNGGCTHYCLEEVGRRCSC 120
QY 121 APGYKGDLLQCHPAVYFPCGRPMKMEKRSKSHKRDTEQDQDVDPRLIDGKTRRGD 180
DB 121 APGYKGDLLQCHPAVYFPCGRPMKMEKRSKSHKRDTEQDQDVDPRLIDGKTRRGD 180
QY 181 SPQVVLDSKKKLAAGAVLIHPSWVLTAAHOMDESKKLVRLGEYDLRREKWEELDDI 240
DB 181 SPQVVLDSKKKLAAGAVLIHPSWVLTAAHOMDESKKLVRLGEYDLRREKWEELDDI 240
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QY 1 ANSFLEELRHSSLERECEIEICDFEAEKEIFQNVDDTLAFMSKHYVGDQCLVPLEHPCA 60
 DB 1 ANSFLEELRHSSLERECEIEICDFEAEKEIFQNVDDTLAFMSKHYVGDQCLVPLEHPCA 60
 QY 61 SLCCGHTCIDIGISFSCDCRSQWEGRFQOREVPSFLNCSLNDGGCTHYCLEEVGMRRCSG 120
 DB 61 SLCCGHTCIDIGISFSCDCRSQWEGRFQOREVPSFLNCSLNDGGCTHYCLEEVGMRRCSG 120
 QY 121 APGYKLGDDLLQCHPAVKPCGRPWKREKERSHLKRDTEDEQDVDPRLIDGKMTRRGD 180
 DB 121 APGYKLGDDLLQCHPAVKPCGRPWKREKERSHLKRDTEDEQDVDPRLIDGKMTRRGD 180
 QY 181 SPQWVLLDSKKKLACGAVLIHPSWVLTAAHCHMDSKLLVRLGEYDLRRWEKELDDI 240
 DB 181 SPQWVLLDSKKKLACGAVLIHPSWVLTAAHCHMDSKLLVRLGEYDLRRWEKELDDI 240
 QY 241 KEVFAHPNYSKSTTDNDIALHLAQPATLSQTIYVICLPDSGLARELNQAQGETLVYGM 300
 DB 241 KEVFAHPNYSKSTTDNDIALHLAQPATLSQTIYVICLPDSGLARELNQAQGETLVYGM 300
 QY 301 GYHSSREKAKRNRTFVYLNFIKIPVPHNECSEVSNMVSNNMLCAGILGRDACEGDS 360
 DB 301 GYHSSREKAKRNRTFVYLNFIKIPVPHNECSEVSNMVSNNMLCAGILGRDACEGDS 360
 QY 361 GGPWVASFHGTWFLVGLVSWGEGCGLLHNYGVYTKVSRYLDMHGHIRDKEARPOKSNAP 419
 DB 361 GGPWVASFHGTWFLVGLVSWGEGCGLLHNYGVYTKVSRYLDMHGHIRDKEARPOKSNAP 419

RESULT 5
 US-09-978-917A-2
 ; Sequence 2, Application US/0978917A
 ; Publication No. US20030027299A1

GENERAL INFORMATION:

APPLICANT: Maxygen Aps; Maxygen Holdings
 TITLE OF INVENTION: Protein C or activated protein C-like molecules
 FILE REFERENCE: 0219us310 - protein C
 CURRENT APPLICATION NUMBER: US/09/978, 917A
 CURRENT FILING DATE: 2001-10-17
 NUMBER OF SEQ ID NOS: 48
 SOFTWARE: PatentIn Ver. 2.1
 SEQ ID NO 2
 LENGTH: 461
 TYPE: PRT
 ORGANISM: Homo sapiens
 FEATURE:
 NAME/KEY: SIGNAL
 LOCATION: (1)...(42)
 FEATURE:
 NAME/KEY: CHAIN
 LOCATION: (43)...(461)
 US-09-978-917A-2

Query Match 100.0%; Score 2324; DB 10; Length 461;

Best Local Similarity 100.0%; Pred. No. 4.2e-190; Mismatches 0; Indels 0; Gaps 0;

Matches 419; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 ANSFLEELRHSSLERECEIEICDFEAEKEIFQNVDDTLAFMSKHYVGDQCLVPLEHPCA 60
 DB 43 ANSFLEELRHSSLERECEIEICDFEAEKEIFQNVDDTLAFMSKHYVGDQCLVPLEHPCA 102
 QY 61 SLCCGHTCIDIGISFSCDCRSQWEGRFQOREVPSFLNCSLNDGGCTHYCLEEVGMRRCSG 120
 DB 103 SLCCGHTCIDIGISFSCDCRSQWEGRFQOREVPSFLNCSLNDGGCTHYCLEEVGMRRCSG 162
 QY 121 APGYKLGDDLLQCHPAVKPCGRPWKREKERSHLKRDTEDEQDVDPRLIDGKMTRRGD 180
 DB 163 APGYKLGDDLLQCHPAVKPCGRPWKREKERSHLKRDTEDEQDVDPRLIDGKMTRRGD 222
 QY 181 SPQWVLLDSKKKLACGAVLIHPSWVLTAAHCHMDSKLLVRLGEYDLRRWEKELDDI 240
 DB 223 SPQWVLLDSKKKLACGAVLIHPSWVLTAAHCHMDSKLLVRLGEYDLRRWEKELDDI 282

QY 241 KEVFAHPNYSKSTTDNDIALHLAQPATLSQTIYVICLPDSGLARELNQAQGETLVYGM 300
 DB 283 KEVFAHPNYSKSTTDNDIALHLAQPATLSQTIYVICLPDSGLARELNQAQGETLVYGM 342
 QY 301 GYHSSREKAKRNRTFVYLNFIKIPVPHNECSEVSNMVSNNMLCAGILGRDACEGDS 360
 DB 343 GYHSSREKAKRNRTFVYLNFIKIPVPHNECSEVSNMVSNNMLCAGILGRDACEGDS 402
 QY 361 GGPWVASFHGTWFLVGLVSWGEGCGLLHNYGVYTKVSRYLDMHGHIRDKEARPOKSNAP 419
 DB 403 GGPWVASFHGTWFLVGLVSWGEGCGLLHNYGVYTKVSRYLDMHGHIRDKEARPOKSNAP 461

RESULT 6
 US-09-997-623-2
 ; Sequence 2, Application US/09997623
 ; Publication No. US20030018175A1

GENERAL INFORMATION:

APPLICANT: Maxygen Aps; Maxygen Holdings
 TITLE OF INVENTION: Protein C or activated protein C-like molecules
 FILE REFERENCE: 0219us410 - protein C
 CURRENT APPLICATION NUMBER: US/09/997, 623
 CURRENT FILING DATE: 2001-11-29
 PRIOR APPLICATION NUMBER: US 09/978, 917
 PRIOR FILING DATE: 2001-10-17
 NUMBER OF SEQ ID NOS: 48
 SOFTWARE: PatentIn Ver. 2.1
 SEQ ID NO 2
 LENGTH: 461
 TYPE: PRT
 ORGANISM: Homo sapiens
 FEATURE:
 NAME/KEY: SIGNAL
 LOCATION: (1)...(42)
 NAME/KEY: CHAIN
 LOCATION: (43)...(461)
 US-09-997-623-2

Query Match 100.0%; Score 2324; DB 12; Length 461;

Best Local Similarity 100.0%; Pred. No. 4.2e-190; Mismatches 0; Indels 0; Gaps 0;

Matches 419; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 ANSFLEELRHSSLERECEIEICDFEAEKEIFQNVDDTLAFMSKHYVGDQCLVPLEHPCA 60
 DB 43 ANSFLEELRHSSLERECEIEICDFEAEKEIFQNVDDTLAFMSKHYVGDQCLVPLEHPCA 102
 QY 61 SLCCGHTCIDIGISFSCDCRSQWEGRFQOREVPSFLNCSLNDGGCTHYCLEEVGMRRCSG 120
 DB 103 SLCCGHTCIDIGISFSCDCRSQWEGRFQOREVPSFLNCSLNDGGCTHYCLEEVGMRRCSG 162
 QY 121 APGYKLGDDLLQCHPAVKPCGRPWKREKERSHLKRDTEDEQDVDPRLIDGKMTRRGD 180
 DB 163 APGYKLGDDLLQCHPAVKPCGRPWKREKERSHLKRDTEDEQDVDPRLIDGKMTRRGD 222
 QY 181 SPQWVLLDSKKKLACGAVLIHPSWVLTAAHCHMDSKLLVRLGEYDLRRWEKELDDI 240
 DB 223 SPQWVLLDSKKKLACGAVLIHPSWVLTAAHCHMDSKLLVRLGEYDLRRWEKELDDI 282
 QY 241 KEVFAHPNYSKSTTDNDIALHLAQPATLSQTIYVICLPDSGLARELNQAQGETLVYGM 300
 DB 283 KEVFAHPNYSKSTTDNDIALHLAQPATLSQTIYVICLPDSGLARELNQAQGETLVYGM 342
 QY 301 GYHSSREKAKRNRTFVYLNFIKIPVPHNECSEVSNMVSNNMLCAGILGRDACEGDS 360
 DB 343 GYHSSREKAKRNRTFVYLNFIKIPVPHNECSEVSNMVSNNMLCAGILGRDACEGDS 402
 QY 361 GGPWVASFHGTWFLVGLVSWGEGCGLLHNYGVYTKVSRYLDMHGHIRDKEARPOKSNAP 419
 DB 403 GGPWVASFHGTWFLVGLVSWGEGCGLLHNYGVYTKVSRYLDMHGHIRDKEARPOKSNAP 461

RESULT 7
 US-10-182-263-2

QY 241 KEVFAHNVSKSTTNDNDIALHLAQPATLSQTIPTCLPDSGLARELNQAGETLVYGM 300
DB 241 KEVFAHNVSKSTTNDNDIALHLAQPATLSQTIPTCLPDSGLARELNQAGETLVYGM 300
QY 301 GYHSSEKAKKRNRTFVLANFKIPVPHNECSEVSNVSNMCAGLGDQDACEGDS 360
DB 301 GYHSSEKAKKRNRTFVLANFKIPVPHNECSEVSNVSNMCAGLGDQDACEGDS 360
QY 361 GGPVWVAFHGTWFLVGLVSWGEGCGLLHNYGYTVKRSYLDWIHGHIRDKEAPQKSNAP 419
DB 361 GGPVWVAFHGTWFLVGLVSWGEGCGLLHNYGYTVKRSYLDWIHGHIRDKEAPQKSNAP 419

RESULT 2

US-09-997-623-4
Sequence 4, Application US/09997623
Publication No. US20030018175A1
GENERAL INFORMATION:
APPLICANT: Maxygen Aps; Maxygen Holdings
TITLE OF INVENTION: Protein C or activated protein C-like molecules
FILE REFERENCE: 0219u6410 - protein C
CURRENT APPLICATION NUMBER: US/09/997,623
CURRENT FILING DATE: 2001-11-29
PRIOR APPLICATION NUMBER: US 09/978,917
PRIOR FILING DATE: 2001-10-17
NUMBER OF SEQ ID NOS: 48
SOFTWARE: PatentIn Ver. 2.1
SEQ ID NO 4
LENGTH: 419
TYPE: PRT
ORGANISM: Homo sapiens
US-09-997-623-4

Query Match 100.0%; Score 2324; DB 12; Length 419;
Best Local Similarity 100.0%; Pred. No. 3.8e-190;
Matches 419; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 ANSFLELRHSSLERECIETCDPEEAKETIPQVDDTLAFWSKHVDGQCLVPLEHPCA 60
DB 1 ANSFLELRHSSLERECIETCDPEEAKETIPQVDDTLAFWSKHVDGQCLVPLEHPCA 60
QY 61 SLCCGHGTCTDGTGFSFSCDSCSGMEGRFCQREVSTFNCSLDNGGCTHYCLEEVGMRCSC 120
DB 61 SLCCGHGTCTDGTGFSFSCDSCSGMEGRFCQREVSTFNCSLDNGGCTHYCLEEVGMRCSC 120
QY 121 APGYKLDGDLQCHPAVYFPCGRPMKRMKRSKSLKRDTEQDQVDPRLDGMKTRRGD 180
DB 121 APGYKLDGDLQCHPAVYFPCGRPMKRMKRSKSLKRDTEQDQVDPRLDGMKTRRGD 180
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QY 241 KEVFAHNVSKSTTNDNDIALHLAQPATLSQTIPTCLPDSGLARELNQAGETLVYGM 300
DB 241 KEVFAHNVSKSTTNDNDIALHLAQPATLSQTIPTCLPDSGLARELNQAGETLVYGM 300
QY 301 GYHSSEKAKKRNRTFVLANFKIPVPHNECSEVSNVSNMCAGLGDQDACEGDS 360
DB 301 GYHSSEKAKKRNRTFVLANFKIPVPHNECSEVSNVSNMCAGLGDQDACEGDS 360
QY 361 GGPVWVAFHGTWFLVGLVSWGEGCGLLHNYGYTVKRSYLDWIHGHIRDKEAPQKSNAP 419
DB 361 GGPVWVAFHGTWFLVGLVSWGEGCGLLHNYGYTVKRSYLDWIHGHIRDKEAPQKSNAP 419

RESULT 3

US-10-182-263-1
Sequence 1, Application US/10182263
Publication No. US20030022354A1
GENERAL INFORMATION:
APPLICANT: Gerlitz, Bruce E
APPLICANT: Jones, Bryan E

APPLICANT: Grimell, Brian W
TITLE OF INVENTION: PROTEIN C DERIVATIVES
FILE REFERENCE: X-13611
CURRENT APPLICATION NUMBER: US/10/182,263
CURRENT FILING DATE: 2002-07-22
PRIOR APPLICATION NUMBER: 60/181948
PRIOR FILING DATE: 2002-02-11
PRIOR APPLICATION NUMBER: 60/189199
PRIOR FILING DATE: 2000-03-14
NUMBER OF SEQ ID NOS: 12
SOFTWARE: PatentIn version 3.1
SEQ ID NO 1
LENGTH: 419
TYPE: PRT
ORGANISM: Homo sapiens
US-10-182-263-1

Query Match 100.0%; Score 2324; DB 14; Length 419;
Best Local Similarity 100.0%; Pred. No. 3.8e-190;
Matches 419; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

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DB 1 ANSFLELRHSSLERECIETCDPEEAKETIPQVDDTLAFWSKHVDGQCLVPLEHPCA 60
QY 61 SLCCGHGTCTDGTGFSFSCDSCSGMEGRFCQREVSTFNCSLDNGGCTHYCLEEVGMRCSC 120
DB 61 SLCCGHGTCTDGTGFSFSCDSCSGMEGRFCQREVSTFNCSLDNGGCTHYCLEEVGMRCSC 120
QY 121 APGYKLDGDLQCHPAVYFPCGRPMKRMKRSKSLKRDTEQDQVDPRLDGMKTRRGD 180
DB 121 APGYKLDGDLQCHPAVYFPCGRPMKRMKRSKSLKRDTEQDQVDPRLDGMKTRRGD 180
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DB 181 SPQVVLDSKKKLLACGAVLIHPSWVLTAAHCDMSKKLVRLGEYDLRRMEKWELEDLI 240
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DB 241 KEVFAHNVSKSTTNDNDIALHLAQPATLSQTIPTCLPDSGLARELNQAGETLVYGM 300
QY 301 GYHSSEKAKKRNRTFVLANFKIPVPHNECSEVSNVSNMCAGLGDQDACEGDS 360
DB 301 GYHSSEKAKKRNRTFVLANFKIPVPHNECSEVSNVSNMCAGLGDQDACEGDS 360
QY 361 GGPVWVAFHGTWFLVGLVSWGEGCGLLHNYGYTVKRSYLDWIHGHIRDKEAPQKSNAP 419
DB 361 GGPVWVAFHGTWFLVGLVSWGEGCGLLHNYGYTVKRSYLDWIHGHIRDKEAPQKSNAP 419

RESULT 4

US-10-168-407-1
Sequence 1, Application US/10168407
Publication No. US20030207435A1
GENERAL INFORMATION:
APPLICANT: Gerlitz, Bruce E
APPLICANT: Jones, Bryan E
TITLE OF INVENTION: PROTEIN C DERIVATIVES
FILE REFERENCE: X-13610
CURRENT APPLICATION NUMBER: US/10/168,407
CURRENT FILING DATE: 2002-11-04
NUMBER OF SEQ ID NOS: 12
SOFTWARE: PatentIn version 3.1
SEQ ID NO 1
LENGTH: 419
TYPE: PRT
ORGANISM: Homo sapiens
US-10-168-407-1

Query Match 100.0%; Score 2324; DB 15; Length 419;
Best Local Similarity 100.0%; Pred. No. 3.8e-190;
Matches 419; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

GenCore version 5.1.6
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OM protein - protein search, using sw model

Run on: June 2, 2004, 16:55:32 ; Search time 48 Seconds

(without alignments)
2455.852 Million cell updates/sec

Title: US-09-997-623-4

Perfect score: 2324

Sequence: 1 ANSFLEELRHSSLEKECIE.....LPMHGHIDKPAQKSNAP 419

Scoring table: BLOSUM62

Gapop 10.0 , Gapext 0.5

Searched: 1155919 seqs, 28133877 residues

Total number of hits satisfying chosen parameters: 1155919

Minimum DB seq length: 0

Maximum DB seq length: 200000000

Post-processing: Minimum Match 0%

Maximum Match 100%

Listing first 45 summaries

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Published Applications_AA:*
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Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

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2	2324	100.0	419	12	US-09-997-623-4 Sequence 1, Appl1
3	2324	100.0	419	14	US-10-182-263-1 Sequence 1, Appl1
4	2324	100.0	419	15	US-10-168-407-1 Sequence 2, Appl1
5	2324	100.0	461	10	US-09-978-917A-2 Sequence 1, Appl1
6	2324	100.0	461	12	US-09-997-623-2 Sequence 2, Appl1
7	2324	100.0	461	14	US-10-182-263-2 Sequence 2, Appl1
8	2324	100.0	461	15	US-10-168-407-2 Sequence 2, Appl1
9	2306	99.2	419	15	US-10-168-407-3 Sequence 3, Appl1
10	2302	99.1	419	15	US-10-168-407-4 Sequence 4, Appl1
11	2298	98.9	415	12	US-10-670-628-2 Sequence 2, Appl1
12	2298	98.9	419	15	US-10-168-407-5 Sequence 5, Appl1
13	2296	98.8	419	14	US-10-182-263-5 Sequence 6, Appl1
14	2294	98.7	419	15	US-10-168-407-6 Sequence 3, Appl1
15	2290	98.5	419	14	US-10-182-263-3 Sequence 3, Appl1

16	2288	98.5	419	14	US-10-182-263-6 Sequence 6, Appl1
17	2286	98.4	419	12	US-10-182-263-4 Sequence 4, Appl1
18	809	34.8	488	12	US-10-406-031-27 Sequence 27, Appl1
19	803	34.6	488	14	US-10-348-504-44 Sequence 44, Appl1
20	803	34.6	488	14	US-10-407-123-27 Sequence 27, Appl1
21	783	33.7	406	10	US-09-782-587B-3 Sequence 3, Appl1
22	783	33.7	406	15	US-10-383-898-1 Sequence 1, Appl1
23	783	33.7	406	16	US-10-263-205B-2 Sequence 2, Appl1
24	783	33.7	444	12	US-10-411-037-8 Sequence 8, Appl1
25	783	33.7	444	12	US-10-382-248-34 Sequence 34, Appl1
26	783	33.7	444	12	US-10-411-026-8 Sequence 8, Appl1
27	783	33.7	444	16	US-10-410-962-8 Sequence 8, Appl1
28	783	33.7	444	16	US-10-411-049-8 Sequence 8, Appl1
29	783	33.7	444	16	US-10-263-205B-3 Sequence 3, Appl1
30	783	33.7	466	14	US-10-017-122-2 Sequence 2, Appl1
31	783	33.7	466	15	US-10-375-741-14 Sequence 14, Appl1
32	783	33.7	467	12	US-10-406-031-8 Sequence 8, Appl1
33	782	33.6	467	12	US-10-406-031-5 Sequence 5, Appl1
34	779.5	33.5	454	12	US-10-406-031-11 Sequence 11, Appl1
35	779	33.5	405	15	US-10-360-101-225 Sequence 225, App
36	777	33.4	467	12	US-10-406-031-2 Sequence 2, Appl1
37	775.5	33.4	455	12	US-10-406-031-17 Sequence 17, Appl1
38	758.5	32.6	453	12	US-10-406-031-14 Sequence 14, Appl1
39	749.5	32.3	437	12	US-10-712-332-2 GENERAL INFORNA
40	746	32.1	488	12	US-10-712-332-1 GENERAL INFORNA
41	741.5	31.9	437	12	US-10-712-332-3 GENERAL INFORNA
42	740	31.8	461	16	US-10-038-854-94 Sequence 94, Appl1
43	739	31.8	456	16	US-10-038-854-96 Sequence 96, Appl1
44	736	31.7	456	16	US-10-038-854-95 Sequence 95, Appl1
45	736	31.7	461	9	US-09-884-901-3 Sequence 3, Appl1

ALIGNMENTS

RESULT 1
US-09-978-917A-4
Sequence 4, Application US/09978917A
Publication No. US20030027295A1
GENERAL INFORMATION:
APPLICANT: Maxygen Abs; Maxygen Holdings
TITLE OF INVENTION: Protein C or activated protein C-like molecules
FILE REFERENCE: 02196310 - protein C
CURRENT APPLICATION NUMBER: US/09/978, 917A
CURRENT FILING DATE: 2001-10-17
NUMBER OF SEQ ID NOS: 48
SOFTWARE: PatentIn Ver. 2.1
SEQ ID NO 4
LENGTH: 419
TYPE: PRT
ORGANISM: Homo sapiens
US-09-978-917A-4

Query Match 100.0%; Score 2324; DB 10; Length 419;
Best Local Similarity 100.0%; Pred. No. 3.8e-190;
Matches 419; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
QY 1 ANSFLEELRHSSLEKECIECDPEBAKEIFQNVDDTLAFAWSKHVGDQCVLPLEHPCA 60
DB 1 ANSFLEELRHSSLEKECIECDPEBAKEIFQNVDDTLAFAWSKHVGDQCVLPLEHPCA 60
QY 61 SLCCGHTCTIDIGSPSCDCSGNEGRFCQREVSFLNCSLDNGGCTHYCLEVGRRCSC 120
DB 61 SLCCGHTCTIDIGSPSCDCSGNEGRFCQREVSFLNCSLDNGGCTHYCLEVGRRCSC 120
QY 121 AFGKLDLDDLLQCHPAVYKPCGRPMKMEKRSHTKRDTEQEDQVDPRLIDGKTRGD 180
DB 121 AFGKLDLDDLLQCHPAVYKPCGRPMKMEKRSHTKRDTEQEDQVDPRLIDGKTRGD 180
QY 181 SPMQVVLDSKKKLAAGVLIHPSWVLTAAHQMDESKKLVRJAEYDLRMEKELDDI 240
DB 181 SPMQVVLDSKKKLAAGVLIHPSWVLTAAHQMDESKKLVRJAEYDLRMEKELDDI 240

PI Murray MJ, Berkner KL, Foster DC;
XX
XX WPI: 1996-251006/25.
DR N-PsDB; AAT32795, AAT32796.
XX
PT New DNA encoding modified forms of opt. activated protein C - and related
PT transformed cells for prodn. of recombinant protein C for use e.g. as an
PT anti-thrombotic agent.
XX
XX
PS Example 1; Fig 2A-C; 34pp; English.
XX
CC Human protein C (AA02600) is a zymogen of a serine protease that plays
CC an important role in the regulation of blood coagulation and the
CC generation of fibrinolytic activity in vivo. It is synthesised in the
CC liver and processed to a 2-chain molecule, which is itself converted to
CC activated protein C. Protein C and activated protein C are useful in the
CC treatment of thrombotic disorders. They can be produced e.g. in mammalian
CC host cells using a cDNA clone (AA132795) derived from Hep G2 cells.
CC Variant protein C, modified to improve cleavage between the heavy and
CC light chains of the circulating intermediate, can also be produced.
CC (Updated on 25-MAR-2003 to correct PF field.)
XX
SQ Sequence 461 AA:

Query Match 100.0%; Score 2324; DB 2; Length 461;
Best Local Similarity 100.0%; Pred. No. 3.3e-143;
Matches 419; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 ANSTLELRHSSLEECIEBELCFEAKETIFQNVDDTLAFMSKRVGDPQCLVPLEHPCA 60
DB 43 ANSTLELRHSSLEECIEBELCFEAKETIFQNVDDTLAFMSKRVGDPQCLVPLEHPCA 102
QY 61 SLCCGHTCIDIGSFSQCRSGMEGRFCQREVSFLNCSLDNGGCTHYCLEVGMKRCSC 120
DB 103 SLCCGHTCIDIGSFSQCRSGMEGRFCQREVSFLNCSLDNGGCTHYCLEVGMKRCSC 162
QY 121 APGYKLGDDILQCHPAVFPQGRPMRMKESKSHLKEDTEDQEDQVDPRLIDGMTRKD 180
DB 163 APGYKLGDDILQCHPAVFPQGRPMRMKESKSHLKEDTEDQEDQVDPRLIDGMTRKD 222
QY 181 SPQOVVLDSKKKLCGAVLIHPSWVLTAAHOMESKKLVRLGEYDLRRMEKELDLDI 240
DB 223 SPQOVVLDSKKKLCGAVLIHPSWVLTAAHOMESKKLVRLGEYDLRRMEKELDLDI 282
QY 241 KEVFAHPNYSKSTTNDIALHLAOPATLSOTIYVICLPDSGLARELNQAGETIVTGW 300
DB 283 KEVFAHPNYSKSTTNDIALHLAOPATLSOTIYVICLPDSGLARELNQAGETIVTGW 342
QY 301 GYHSSREKAKRRTFVNFIKIPVPHNECESVSNVSENNLCAGILGDRDACEGDS 360
DB 343 GYHSSREKAKRRTFVNFIKIPVPHNECESVSNVSENNLCAGILGDRDACEGDS 402
QY 361 GGPVVASFHGTWFLVGLVSNQEGGILHNYGYTKVSRYLDMIGHIRKEAPQKSWAP 419
DB 403 GGPVVASFHGTWFLVGLVSNQEGGILHNYGYTKVSRYLDMIGHIRKEAPQKSWAP 461

Search completed: June 2, 2004, 16:55:25
Job time : 63 secs

CC	agent or a fibrinolysis promoter
XX	
SQ	Sequence 461 AA;

Query Match	100.0%;	Score 2324;	DB 2;	Length 461;
Best Local Similarity	100.0%;	Pred. NO. 3.3e-143;		
Matches 419; Conservative	0;	Mismatches 0;	Indels 0;	Gaps 0;

Qy	1	ANSLFLEHSHLSBECIEEICDPEBAEIKPONDUTLAFMSKHYDDOCTVPLEHPCA	60
Db	43	ANSLFLEHSHLSBECIEEICDPEBAEIKPONDUTLAFMSKHYDDOCTVPLEHPCA	102
Qy	61	SLCCGGATCIDISGFSQDCRSGBRGFCOREVSFLNCSLDNGGCTHCLAEVGNRSC	120
Db	103	SLCCGGATCIDISGFSQDCRSGBRGFCOREVSFLNCSLDNGGCTHCLAEVGNRSC	162
Qy	121	APGKLGDDLLQCHPAVKPCGRPWKEMEKRSYKRDTEDEQVDPRLIDKNTRRGD	180
Db	163	APGKLGDDLLQCHPAVKPCGRPWKEMEKRSYKRDTEDEQVDPRLIDKNTRRGD	222
Qy	181	SPQVYVLLDSKKKLLACANVLIHPSWLTPAAHCDSEKLLVTLGTYDLRWEMWELDDI	240
Db	223	SPQVYVLLDSKKKLLACANVLIHPSWLTPAAHCDSEKLLVTLGTYDLRWEMWELDDI	282
Qy	241	KEVFEVHPNYSKSTTDNDIALHLAOPATLSQTIVPICLPDSGLARELNAGQETLYTGW	300
Db	283	KEVFEVHPNYSKSTTDNDIALHLAOPATLSQTIVPICLPDSGLARELNAGQETLYTGW	342
Qy	301	GYSHSREKAKNRTPVLANFIKIPVPPNECSRYMSNVSSENNLCAGLIGDRDACEGS	360
Db	343	GYSHSREKAKNRTPVLANFIKIPVPPNECSRYMSNVSSENNLCAGLIGDRDACEGS	402
Qy	361	GGPVASVSHGTMFLVGLVSMGEGCLLNQVTVTKYSRTLDINGHTRDEAPQSNAP	419
Db	403	GGPVASVSHGTMFLVGLVSMGEGCLLNQVTVTKYSRTLDINGHTRDEAPQSNAP	461

RESULT 15	
ID	AA02600 standard; protein, 461 AA.
XX	AA02600;
XX	
DT	25-MAR-2003 (revised)
DI	05-NOV-1996 (first entry)
XX	
DE	Human protein C.
XX	
KM	Activated protein C; serine protease; thrombosis; thrombolytic,
XX	fibrinolytic; antithrombotic; blood clotting; therapy.
KX	
OS	Homo sapiens.
XX	
FH	Key
PT	Peptide
PT	/label= Pre-pro-peptide
PT	43..461
PT	/label= Mat_protein
PT	59..64
FT	Domain
FT	/label= G1A_domain
FT	92
FT	/note= "forms disulphide bond with Cys111"
FT	101
FT	/note= "foms disulphide bond with Cys105"
FT	105
FT	/note= "forms disulphide bond with Cys101"
FT	106
FT	/note= "forms disulphide bond with Cys120"
FT	111
FT	/note= "forms disulphide bond with Cys92"
FT	120
FT	/note= "forms disulphide bond with Cys106"
FT	122
FT	Disulfide-bond

FT	/note= "forms disulphide bond with Cys131"	131
FT	/note= "forms disulphide bond with Cys122"	138
FT	/label= N-glycosylation_site	140
FT	/note= "forms disulphide bond with Cys151"	147
FT	/note= "forms disulphide bond with Cys160"	151
FT	/note= "forms disulphide bond with Cys140"	160
FT	/note= "forms disulphide bond with Cys147"	162
FT	/note= "forms disulphide bond with Cys175"	175
FT	/note= "forms disulphide bond with Cys162"	183
FT	/note= "forms disulphide bond with Cys319"	196
FT	/note= "residue 196 is replaced by Lys, Arg or in constructs of the invention"	197..198
FT	/note= "cleavage site for connecting dipeptide"	198..199
FT	/note= "residues 198-199 are replaced by Lys-Lys or Arg Arg in constructs of the invention"	198..199
FT	/note= "cleavage site between connecting dipeptide and activation peptide"	198..199
FT	/note= "cleavage site between connecting dipeptide and activation peptide"	200..211
FT	/label= Activated_protein-C	200
FT	/note= "residue 200 is replaced by Ala, Ser, Thr or Gly in constructs of the invention"	211..212
FT	/note= "cleavage site for activation peptide"	238
FT	/note= "forms disulphide bond with Cys254"	254
FT	/note= "forms disulphide bond with Cys238"	290
FT	/label= N-glycosylation_site	319
FT	/note= "forms disulphide bond with Cys183"	355
FT	/label= N-glycosylation_site	371
FT	/label= N-glycosylation_site	373
FT	/note= "forms disulphide bond with Cys387"	387
FT	/note= "forms disulphide bond with Cys373"	398
FT	/note= "forms disulphide bond with Cys426"	426
FT	/note= "forms disulphide bond with Cys 398"	
XX	US5516650-A.	
XX		
XX	14-MAY-1996.	
XX		
XX	08-APR-1994.	94US-00225253.
XX		
XX	27-JUN-1985.	85US-00749600.
XX	29-OCT-1986.	86US-00924462.
XX	08-DEC-1987.	87US-00130370.
XX	28-FEB-1989.	89US-00317205.
XX	10-SEP-1990.	90US-00582121.
XX	04-DEC-1992.	92US-00987532.
XX		
XX	(ZYMO) ZYMOGENETICS INC.	

QY 121 APGYKLGDDLLQCHPAVKPCGRPMKMEKKRSHLRKDTEDQEDVDPRLLDGKMTREGD 180
 Db 163 APGYKLGDDLLQCHPAVKPCGRPMKMEKKRSHLRKDTEDQEDVDPRLLDGKMTREGD 222
 QY 181 SPWQVLLDSSKKKLAGAVLIHPSVLTAAHCMDSESKLLVRLGEYDLRRMEKWELELDI 240
 Db 223 SPWQVLLDSSKKKLAGAVLIHPSVLTAAHCMDSESKLLVRLGEYDLRRMEKWELELDI 282
 QY 241 KEVFPHPNYSKSTTDNDIALHLAQPATLSQTIIVPICLPDSGLARELNAGQETLYTGM 300
 Db 283 KEVFPHPNYSKSTTDNDIALHLAQPATLSQTIIVPICLPDSGLARELNAGQETLYTGM 342
 QY 301 GHSSREKREKARNETFVLFNFIKIPVPHNECSEVMSNMVSENLCAGLIGRQDACEGDS 360
 Db 343 GHSSREKREKARNETFVLFNFIKIPVPHNECSEVMSNMVSENLCAGLIGRQDACEGDS 402
 QY 361 GGPVVASFHGTWFLVGLVSWGCGCLHNYGVYTKVSRYLDMWIGHIRDKKAPQKSWAP 419
 Db 403 GGPVVASFHGTWFLVGLVSWGCGCLHNYGVYTKVSRYLDMWIGHIRDKKAPQKSWAP 461

RESULT 12

AAR13081 standard; protein; 461 AA.

ID AAR13081 standard; protein; 461 AA.
 XX AAR13081;
 AC AAR13081;
 XX
 DT 25-MAR-2003 (revised)
 DT 30-SEP-1991 (first entry)
 XX
 DE Human protein C.
 XX
 KW Phospholipid; binding protein; lipocortin; domain; vitamin K; PBP;
 KW gla-domain; VKDP.
 XX
 OS Homo sapiens.
 XX
 XX
 FH Key Location/Qualifiers
 FH Peptide 1..42
 FT /label= sig_peptide
 FT Protein 43..461
 FT /label= mat_protein
 XX
 PN W09109953-A.
 XX
 PD 11-JUL-1991.
 XX
 PF 29-DEC-1989; 89US-00459082.
 XX
 PR 29-DEC-1989; 89US-00459082.
 XX
 PA (ZYMO) ZYMOGENETICS INC.
 XX
 PI Foster DC;
 XX
 DR WPI; 1991-222905/30.
 DR N-PSDB; AAQ12678.
 XX
 XX
 PT Recombinant prodn. of hybrid phospholipid-binding proteins - comprising
 PT lipocortin phospholipid-binding domain and vitaminK-dependent protein.
 XX
 PS Disclosure; Fig 2; 57pp; English.
 XX
 CC This sequence, or a fragment of it, is used in the construction of hybrid
 CC phospholipid-binding proteins (PBP) having the same biological activity
 CC as human protein C or human activated protein C. The hybrid sequence
 CC would comprise at least one lipocortin phospholipid binding domain (PBD),
 CC e.g. of PAP-1, joined to a gla-domainless protein C or activated protein
 CC C. See AAQ12680-81 for such examples. See also AAQ12678-81. (Updated on
 CC 25-MAR-2003 to correct PA field.)
 XX
 SQ Sequence 461 AA;

Query Match 100.0%; Score 2324; DB 2; Length 461;
 Best local Similarity 100.0%; Pred. No. 3,3e-143;
 Matches 419; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 ANSFLLEIRHSSLEKECTIEICDFEFAKEIFONVDDTLTAPWSKHYVDGQCLVLPLEHPCA 60
 Db 43 ANSFLLEIRHSSLEKECTIEICDFEFAKEIFONVDDTLTAPWSKHYVDGQCLVLPLEHPCA 102
 QY 61 SLCCGHTCIDIGSFCDCRSQWERPCQREVSFLNCSLDNGGCTHYCLEEVNRCSC 120
 Db 103 SLCCGHTCIDIGSFCDCRSQWERPCQREVSFLNCSLDNGGCTHYCLEEVNRCSC 162
 QY 121 APGYKLGDDLLQCHPAVKPCGRPMKMEKKRSHLRKDTEDQEDVDPRLLDGKMTREGD 180
 Db 163 APGYKLGDDLLQCHPAVKPCGRPMKMEKKRSHLRKDTEDQEDVDPRLLDGKMTREGD 222
 QY 181 SPWQVLLDSSKKKLAGAVLIHPSVLTAAHCMDSESKLLVRLGEYDLRRMEKWELELDI 240
 Db 223 SPWQVLLDSSKKKLAGAVLIHPSVLTAAHCMDSESKLLVRLGEYDLRRMEKWELELDI 282
 QY 241 KEVFPHPNYSKSTTDNDIALHLAQPATLSQTIIVPICLPDSGLARELNAGQETLYTGM 300
 Db 283 KEVFPHPNYSKSTTDNDIALHLAQPATLSQTIIVPICLPDSGLARELNAGQETLYTGM 342
 QY 301 GHSSREKREKARNETFVLFNFIKIPVPHNECSEVMSNMVSENLCAGLIGRQDACEGDS 360
 Db 343 GHSSREKREKARNETFVLFNFIKIPVPHNECSEVMSNMVSENLCAGLIGRQDACEGDS 402
 QY 361 GGPVVASFHGTWFLVGLVSWGCGCLHNYGVYTKVSRYLDMWIGHIRDKKAPQKSWAP 419
 Db 403 GGPVVASFHGTWFLVGLVSWGCGCLHNYGVYTKVSRYLDMWIGHIRDKKAPQKSWAP 461

RESULT 13

AAR13074 standard; protein; 461 AA.

ID AAR13074 standard; protein; 461 AA.
 XX AAR13074;
 AC AAR13074;
 XX
 DT 25-MAR-2003 (revised)
 DT 02-OCT-1991 (first entry)
 XX
 DE Protein C precursor.
 XX
 KW Anticoagulant; fibrinolysis.
 KW
 XX
 OS Homo sapiens.
 XX
 XX
 FH Key Location/Qualifiers
 FH Peptide 2..42
 FT /label= pre-pro peptide
 FT Region 43..197
 FT /label= light chain
 FT Domain 43..79
 FT /label= Gla domain
 FT Modified-site 48
 FT /label= gamma carboxyglutamic acid
 FT Modified-site 49
 FT /label= gamma carboxyglutamic acid
 FT Modified-site 56
 FT /label= gamma carboxyglutamic acid
 FT Modified-site 58
 FT /label= gamma carboxyglutamic acid
 FT Modified-site 61
 FT /label= gamma carboxyglutamic acid
 FT Modified-site 62
 FT /label= gamma carboxyglutamic acid
 FT Modified-site 67
 FT /label= gamma carboxyglutamic acid
 FT Modified-site 68
 FT /label= gamma carboxyglutamic acid
 FT Modified-site 71
 FT /label= gamma carboxyglutamic acid

PR 28-DEC-1987; 87US-00138009.

XX (ELLI) LILLY & CO ELI.

XX Bang NU, Ehrlich HU, Grinnel BW, Yan SB;

XX WPI; 1989-194452/27.

XX N-PSDB; AAN90187.

XX New DNA encoding zymogen form of human protein C - and its activated
PT deriv., useful as e.g. antithrombotic agents more sensitive to thrombin
PT activation.

XX Disclosure: Page 4 - 7; 65pp; English.

XX This is the protein sequence of nascent human protein C encoded by the
CC DNA of AAN90187, which is derived from cDNA clones prepd. from human
CC liver mRNA. It comprises the following regions: residues 1-42 are the
CC signal peptide and propeptide of human protein C; important for directing
CC secretion and gamma-carboxylation of protein C; residues 43-197, once
CC post-translationally modified, constitute the light chain of both the
CC two-chain zymogen and activated forms of protein C; residues 198-9 are
CC believed to be removed (on basis of homology with bovine protein C),
CC probably by a 2 step process comprising a first cleavage (either between
CC residues 197-8 or 199-200), followed by carboxypeptidase or
CC aminopeptidase action, to form 2 chain protein C; residues 200-211
CC constitute the activation peptide, which is removed from the zymogen
CC forms to obtain activated protein C; residues 212-461, once post-
CC translationally modified, constitute the activated heavy chain of active
CC protein C; and the heavy chain of the 2 chain form of protein C zymogen,
CC once post-translationally-modified, is composed of residues 200-461.
CC Protein C zymogen and activated protein C are regulators of haemostasis,
CC differing from native protein C by increased sensitivity to activation by
CC thrombin and chromidin/ thrombomodulin (even in presence of Ca ions) and
CC longer in vivo half life. They are useful as on-demand antithrombotic
CC agents, (replacements for heparin and hydroxycoumarins) and for treatment
CC of hereditary protein C deficiency states. (Updated on 25-MAR-2003 to
CC correct PA field.)

XX Sequence 461 AA;

XX Query Match 100.0%; Score 2324; DB 1; Length 461;

XX Best Local Similarity 100.0%; Pred. No. 3.3e-143;

XX Matches 419; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

XX 1 ANSFLELRHSSLEKCEIECDPEAKETFQNVDDTLAFWSKHYVGDQCLVPLEHPCA 60
DB 43 ANSFLELRHSSLEKCEIECDPEAKETFQNVDDTLAFWSKHYVGDQCLVPLEHPCA 102
XX 61 SLCCGHGTCIDIGISFSCDCRSWGEGFQREVSFLNCSLDNGGCTHYCLEEVGWRRCSC 120
DB 103 SLCCGHGTCIDIGISFSCDCRSWGEGFQREVSFLNCSLDNGGCTHYCLEEVGWRRCSC 162
XX 121 APGYKLGGDDLLQCHPAVPCGPRWMEKESHSKJEDTEQDEQVDPRLIDGEMTRRGD 180
DB 163 APGYKLGGDDLLQCHPAVPCGPRWMEKESHSKJEDTEQDEQVDPRLIDGEMTRRGD 222
XX 181 SPWQVYLLDSKKKLAAGVLIHRSWVLTAAHOMESKLLVRLGEYDLRRKWEKELDLDI 240
DB 223 SPWQVYLLDSKKKLAAGVLIHRSWVLTAAHOMESKLLVRLGEYDLRRKWEKELDLDI 282
XX 241 KEVVAHNTSKSTTNDIALHLAOPATLSQTVICLPSGLABEHLNONGEITVGTG 300
DB 283 KEVVAHNTSKSTTNDIALHLAOPATLSQTVICLPSGLABEHLNONGEITVGTG 342
XX 301 GYHSSREKAKENRTFVNLFIKIPVPHNECSYVMSNVSNNLCAGLIGRQDACEGDS 360
DB 343 GYHSSREKAKENRTFVNLFIKIPVPHNECSYVMSNVSNNLCAGLIGRQDACEGDS 402
XX 361 GGPVWASFGTGLVGLVSWEGCGLLHNYGTYTKRSRYDWHGHIDKXAPQXSNAP 419
DB 403 GGPVWASFGTGLVGLVSWEGCGLLHNYGTYTKRSRYDWHGHIDKXAPQXSNAP 461

RESULT 11

XX AAR13622

XX ID AAR13622 standard; protein; 461 AA.

XX AC AAR13622;

XX 25-MAR-2003 (revised)

XX 04-NOV-1991 (first entry)

XX Human protein C.

XX HPC.

XX Homo sapiens.

XX Key Location/Qualifiers

XX Domain 1..152

XX Peptide 1..42

XX Peptide 43..461

XX Peptide 170..419

XX Peptide 43..461

XX Peptide 170..419

XX Peptide 43..461

XX Peptide 170..419

XX Peptide 43..461

XX Peptide 170..419

XX Peptide 43..461

XX Peptide 170..419

XX Peptide 43..461

XX Peptide 170..419

XX Peptide 43..461

XX Peptide 170..419

XX Peptide 43..461

XX Peptide 170..419

XX Peptide 43..461

XX Peptide 170..419

XX Peptide 43..461

XX Peptide 170..419

XX Peptide 43..461

XX Peptide 170..419

XX Peptide 43..461

XX Peptide 170..419

XX Peptide 43..461

XX Peptide 170..419

XX Peptide 43..461

```

Db      343 GHSSEKAKRNRTFVLANFIKIPVPHNECSYVMSNMVSENNLCAGILGRQDA CEDGS 402
QY      361 GGPVVASFHGTWFLVGLVMSGCGILHNYGYTKVRYLWIGHIRDKAPQKSWAP 419
      403 GGPVVASFHGTWFLVGLVMSGCGILHNYGYTKVRYLWIGHIRDKAPQKSWAP 461

RESULT 9
AAP70855
ID      AAP70855 standard; protein; 461 AA.
AC      AAP70855;
DT      25-MAR-2003 (revised)
DT      10-MAY-1991 (first entry)
DE      Human Protein C.
KW      human Protein C; anti-coagulant; thrombosis; serine protease.
OS      Homo sapiens.
XX      XX
FH      Key
FT      Peptide
      1..42 Location/Qualifiers
      /label= prepro leader peptide
FT      Disulfide-bond
      59..64
      60..63
      /label= gamma-carboxyglutamic acid (Gla) domain
FT      Domain
      92..175
      /label= growth factor domains
FT      Disulfide-bond
      92..111
FT      Disulfide-bond
      101..106
FT      Disulfide-bond
      105..120
FT      Disulfide-bond
      122..131
      139
      /label= N-glycosylation site
FT      Disulfide-bond
      140..151
FT      Disulfide-bond
      147..160
FT      Disulfide-bond
      162..175
FT      Disulfide-bond
      183..319
      /note= "links together the two processed chains"
FT      Cleavage-site
      197..198
      /note= "apparent processing site for connecting dipeptide"
FT      Cleavage-site
      199..200
      /note= "apparent processing site for connecting dipeptide"
FT      Cleavage-site
      211..212
      /note= "in heavy chain; converts to activated protein C"
FT      Disulfide-bond
      238..254
      290
      /label= N-glycosylation site
FT      Modified-site
      355
      /label= N-glycosylation site
FT      Modified-site
      371
      /label= N-glycosylation site
FT      Disulfide-bond
      373..387
FT      Disulfide-bond
      398..426
XX      XX
PN      EP215548-A.
PD      25-MAR-1987.
XX      XX
PF      26-JUN-1986; 86EP-00304970.
XX      XX
PR      27-JUN-1985; 85US-00749600.
PR      15-AUG-1985; 85US-00766109.
XX      XX
PA      (Zymo) ZYMOGENETICS INC.
PA      (UNITW) UNIT WASHINGTON.
PI      Murray MJ, Berkner KL, Foster DC, Davle BW,

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XX      XX
DR      MPI, 1987-081505/12.
DR      N-PSDB; AAN70102.
XX      XX
PT      Human protein C or activated protein C - prepd. using expression vector
PT      capable of integration in mammalian host cell DNA.
XX      XX
PS      Claim 4; Fig 4; 52pp; English.
XX      XX
CC      Recombinantly produced protein C can be used to treat thrombotic
CC      disorders such as venous thrombosis as it has anti-coagulant properties.
CC      The protein sequence is thought to yield two peptide chains; the first
CC      contains the Gla domain and growth factor domains and the second (the
CC      activation peptide) contains the catalytic domain. (Updated on 25-MAR-
CC      2003 to correct PA field.)
XX      XX
SQ      Sequence 461 AA;
      Query Match      100.0%; Score 2324; DB 1; Length 461;
      Best Local Similarity 100.0%; Pred. No. 3.3e-143;
      Matches 419; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY      1 ANSFLEELHSHSLRECEIEICDFEPAKEIFQNVDDTLAFWSKHYDQGLVPLEHPCA 60
      43 ANSFLEELHSHSLRECEIEICDFEPAKEIFQNVDDTLAFWSKHYDQGLVPLEHPCA 102
QY      61 SLCCGHTCIDIGSFCDCRSQMEGRFCOREVSFLNCSLDNGGCTHYCLEVGMRRCSG 120
      103 SLCCGHTCIDIGSFCDCRSQMEGRFCOREVSFLNCSLDNGGCTHYCLEVGMRRCSG 162
QY      121 APGYKLGDDLLQCHPAVKFPCGRPWMEKRRSHLKDTEDEQVDPRLIDGMTRRGD 180
      163 APGYKLGDDLLQCHPAVKFPCGRPWMEKRRSHLKDTEDEQVDPRLIDGMTRRGD 222
QY      181 SPQVVLDSKSKKLLACANVLIHPSWVLTAAQCMDESKKLVLRGSDYDRMEKVELDLDI 240
      223 SPQVVLDSKSKKLLACANVLIHPSWVLTAAQCMDESKKLVLRGSDYDRMEKVELDLDI 282
QY      241 KEVFVHPNYSKSTIDNDIALHLAOPATLSQTYVICLPDSGLARELNQAGCEITVATSM 300
      283 KEVFVHPNYSKSTIDNDIALHLAOPATLSQTYVICLPDSGLARELNQAGCEITVATSM 342
QY      301 GHSSEKAKRNRTFVLANFIKIPVPHNECSYVMSNMVSENNLCAGILGRQDA CEDGS 360
      343 GHSSEKAKRNRTFVLANFIKIPVPHNECSYVMSNMVSENNLCAGILGRQDA CEDGS 402
QY      361 GGPVVASFHGTWFLVGLVMSGCGILHNYGYTKVRYLWIGHIRDKAPQKSWAP 419
      403 GGPVVASFHGTWFLVGLVMSGCGILHNYGYTKVRYLWIGHIRDKAPQKSWAP 461

RESULT 10
AAP90401
ID      AAP90401 standard; protein; 461 AA.
AC      AAP90401;
DT      25-MAR-2003 (revised)
DT      01-NOV-1989 (first entry)
DE      Zymogen form of human protein C.
KW      Human protein C; zymogen form; activated C protein; human liver mRNA;
KW      signal peptide; propeptide; antithrombotic.
XX      XX
OS      Homo sapiens.
XX      XX
PN      EP323149-A.
XX      XX
PD      05-JUL-1989.
XX      XX
PF      22-DEC-1988; 88EP-00312201.
XX      XX

```

RESULT 7

AAPE1104
ID AAPB1104 standard; protein; 460 AA.
XX
AC AAPB1104;
XX
DT 25-MAR-2003 (revised)
DT 16-SEP-1990 (first entry)
XX
DE Sequence of human protein C.
XX
KW Human protein C; plasmin ppc 1.
XX
OS Homo sapiens.
XX
PN JP63263083-A.
XX
PD 31-OCT-1988.
XX
PF 21-APR-1987; 87JP-00096341.
XX
PR 21-APR-1987; 87JP-00096341.
XX
PA (FAH) HOECHST JAPAN LTD.
XX
DR WPI; 1988-350711/49.
XX
DR N-PSDB; AANB1408.
XX
PT Human protein C gene - prepd. from new DNA having specified base
PT sequence.
XX
PS Disclosure; Page ?; 16pp; Japanese.
XX
CC The human protein C is expressed in large amts. using plasmid ppc 1 in
CC E.coli K12/On 225 (FERM P-9297). (Updated on 25-MAR-2003 to correct PD
CC field.) (Updated on 25-MAR-2003 to correct PA field.)
XX
SQ Sequence 460 AA.

Query Match 100.0%; Score 2324; DB 1; Length 460;
Best Local Similarity 100.0%; Pred. No. 3.3e-143;
Matches 419; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 ANSTLEELHSLSEECIEBEICDFEAKETFQNVDDTLATWSKHYVGDQCLVPLEHPCA 60
DB 42 ANSTLEELHSLSEECIEBEICDFEAKETFQNVDDTLATWSKHYVGDQCLVPLEHPCA 101
QY 61 SLCCGHGTCIDIGISFSCDCRSWGEGFCQREVSFLNCSLDNGGCTHYCLEBVGMRRCSC 120
DB 102 SLCCGHGTCIDIGISFSCDCRSWGEGFCQREVSFLNCSLDNGGCTHYCLEBVGMRRCSC 161
QY 121 APGYKLGDDLLQCHPAVYFPCGRPWKRMKKRSHLKDTEDQEDVDPRLLDGMTRRGD 180
DB 162 APGYKLGDDLLQCHPAVYFPCGRPWKRMKKRSHLKDTEDQEDVDPRLLDGMTRRGD 221
QY 181 SPQOVVLLDSKKKLCAGAVLIHPSWVLTAAHCDMSKKLVRLGEYDLRRMKEKELDLDI 240
DB 222 SPQOVVLLDSKKKLCAGAVLIHPSWVLTAAHCDMSKKLVRLGEYDLRRMKEKELDLDI 281
QY 241 KEVFNPNYSKSTTDNDIALHLAOPATLSQTIYVICLPDSGLAEELNQAQGETIVTGM 300
DB 282 KEVFNPNYSKSTTDNDIALHLAOPATLSQTIYVICLPDSGLAEELNQAQGETIVTGM 341
QY 301 GYHSSREKAKNRTFVLANFIKIPVPHNECEVSNMVSNNLCAGLIGRDACGDS 360
DB 342 GYHSSREKAKNRTFVLANFIKIPVPHNECEVSNMVSNNLCAGLIGRDACGDS 401
QY 361 GGPVWASPHGTWFLVGLVSWGEGCGLIHNYVYTKSRVYLDHGHITPDKAARPKSNAP 419
DB 402 GGPVWASPHGTWFLVGLVSWGEGCGLIHNYVYTKSRVYLDHGHITPDKAARPKSNAP 460

RESULT 8

AAPE0001
ID AAP60001 standard; protein; 461 AA.

XX
AC AAP60001;
XX
DT 25-MAR-2003 (revised)
DT 25-JUL-1991 (first entry)
XX
DE Sequence of polypeptide with human protein C activity.
XX
DE Vascular disorder therapy; protein C deficiency.
XX
KW Homo sapiens.

OS
FH Key Location/Qualifiers
FT 1..32
FT /note= "encoded by AAN60004"
FT Protein 33..461
FT /note= "encoded by AAN60001"

PN EP191606-A.
XX
PD 20-AUG-1986.
XX
PF 06-FEB-1986; 86EP-00300823.
XX
PR 08-FEB-1985; 85US-00699967.
XX
PA (ELIL) LILLY & CO ELI.

PI Bang NU, Beckmann RJ, Taskunas SR, Lai MHT, Little SP, Long GL;
PI Sauterle RF;
XX
DR WPI; 1986-220077/34.
XX

PT Prodn. of polypeptide having human protein C activity - is by recombinant
PT DNA procedures for prod. useful against vascular disorders.

PS Disclosure; Page 10-12; 121pp; English.

CC The claimed sequence AAN60001 has "RIN-RW" attached to its 5' end
CC wherein: R= AAN60002 or AAN60003, and R1= AAN60004 or AAN60005; and M and
CC N= 0 or 1; provided that when M=0, N=0; and that when R= AAN60002, R1=
CC AAN60004; and that when R= AAN60003, R1= AAN60005. (Updated on 25-MAR-
CC 2003 to correct PA field.)
XX

SQ Sequence 461 AA;

Query Match 100.0%; Score 2324; DB 1; Length 461;
Best Local Similarity 100.0%; Pred. No. 3.3e-143;
Matches 419; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 ANSTLEELHSLSEECIEBEICDFEAKETFQNVDDTLATWSKHYVGDQCLVPLEHPCA 60
DB 43 ANSTLEELHSLSEECIEBEICDFEAKETFQNVDDTLATWSKHYVGDQCLVPLEHPCA 102
QY 61 SLCCGHGTCIDIGISFSCDCRSWGEGFCQREVSFLNCSLDNGGCTHYCLEBVGMRRCSC 120
DB 103 SLCCGHGTCIDIGISFSCDCRSWGEGFCQREVSFLNCSLDNGGCTHYCLEBVGMRRCSC 162
QY 121 APGYKLGDDLLQCHPAVYFPCGRPWKRMKKRSHLKDTEDQEDVDPRLLDGMTRRGD 180
DB 162 APGYKLGDDLLQCHPAVYFPCGRPWKRMKKRSHLKDTEDQEDVDPRLLDGMTRRGD 222
QY 181 SPQOVVLLDSKKKLCAGAVLIHPSWVLTAAHCDMSKKLVRLGEYDLRRMKEKELDLDI 240
DB 222 SPQOVVLLDSKKKLCAGAVLIHPSWVLTAAHCDMSKKLVRLGEYDLRRMKEKELDLDI 282
QY 241 KEVFNPNYSKSTTDNDIALHLAOPATLSQTIYVICLPDSGLAEELNQAQGETIVTGM 300
DB 282 KEVFNPNYSKSTTDNDIALHLAOPATLSQTIYVICLPDSGLAEELNQAQGETIVTGM 342
QY 301 GYHSSREKAKNRTFVLANFIKIPVPHNECEVSNMVSNNLCAGLIGRDACGDS 360

XX 19-OCT-2001; 2001ER-00013492.
XX (INRM) INSERM INST NAT SANTE & RECH MEDICALE.
XX Le Bonbec B, Marque PE, Louvain V, Calmel C, Bianchini E;
XX Alach M;
XX WPI; 2003-451127/43.
XX
XX New chimeric protein, cleavable by thrombin, useful e.g. as
PT antithrombotic agents, particularly modified protein C containing
PT artificial activation sequence.
XX
XX Disclosure; Fig 1; 51pp; French.
XX
XX The present sequence represents the mature form of human protein C. This
CC protein is an essential factor in the regulation of coagulation. The
CC specification describes a chimeric protein, based on protein C, which
CC comprises a thrombin-cleavable artificial sequence. This artificial
CC sequence is of a formula given in the specification, and comprises a
CC peptide from fibrinopeptide A, and a thrombin-cleavage site, other than
CC that of the alpha-chain of fibrinogen. The chimeric protein and serine
CC protease derivatives obtained by cleaving the chimeric protein with
CC thrombin, are useful as antithrombotic, antiinflammatory, antiapoptotic
CC and profibrinolytic agents, for treatment or prevention of
CC hypercoagulable diseases, e.g. venous and arterial thrombosis;
CC myocardial infarction; pulmonary embolism; reocclusion after angioplasty
CC and alterations in the genes for protein C and thrombomodulin
XX
SQ Sequence 419 AA;
Query Match 100.0%; Score 2324; DB 6; Length 419;
Best Local Similarity 100.0%; Pred. No. 3e-143;
Matches 419; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
QY 1 ANSPLEELHSSLSERECIEBEICDFEAKETIFQVNDTLAFMSKHVGDQCLVPLEHPCA 60
DB 1 ANSPLEELHSSLSERECIEBEICDFEAKETIFQVNDTLAFMSKHVGDQCLVPLEHPCA 60
QY 61 SLCCGHTCIDIGISFSDCCRSQWEGFPCQREVSFLNCSLDNGGCTHYCLEBVGWRRCSC 120
DB 61 SLCCGHTCIDIGISFSDCCRSQWEGFPCQREVSFLNCSLDNGGCTHYCLEBVGWRRCSC 120
QY 121 APGYKLGDDLQCHPAVYKPCGRPMKMEKRSKSHKRDTEQDQVDPRLIDGKTRRGD 180
DB 121 APGYKLGDDLQCHPAVYKPCGRPMKMEKRSKSHKRDTEQDQVDPRLIDGKTRRGD 180
QY 181 SPQVVLDSKKKLAAGAVALIHPSWVLTAAHOMESKKLAVRLGEYDLRRWEKXELDDI 240
DB 181 SPQVVLDSKKKLAAGAVALIHPSWVLTAAHOMESKKLAVRLGEYDLRRWEKXELDDI 240
QY 241 KEVFAHNYSKSTTNDIALHLAOPATLSQTTIVICLPDSGLAEELNQAQETLVGW 300
DB 241 KEVFAHNYSKSTTNDIALHLAOPATLSQTTIVICLPDSGLAEELNQAQETLVGW 300
QY 301 GYHSREKEAKNRRTFVNLFIKIPVPHNECSFVSNVSNMLCAGILGRQACBGDS 360
DB 301 GYHSREKEAKNRRTFVNLFIKIPVPHNECSFVSNVSNMLCAGILGRQACBGDS 360
QY 361 GGPWVASFHGTWFLVGLVSWGEGGGLHNYGYTVKSRVLDMLHGHIRDEKAPQKSNAP 419
DB 361 GGPWVASFHGTWFLVGLVSWGEGGGLHNYGYTVKSRVLDMLHGHIRDEKAPQKSNAP 419
RESULT 6
ADCA0014
ID ADCA0014 standard; protein; 419 AA.
XX ADCA0014;
XX 18-DEC-2003 (first entry)
XX

DE Human activated protein C-related protein #3.
XX
XX human; activated protein C; APC; thrombotic disorder;
XX intravascular coagulation; thrombotic stroke; deep vein thrombosis;
XX pulmonary embolism; peripheral arterial thrombosis;
XX acute myocardial infarction; retina thrombosis.
XX
XX Homo sapiens.
XX
XX WO2003075834-A2.
XX
XX 18-SEP-2003.
XX
XX 27-FEB-2003; 2003WO-US005046.
XX
XX 08-MAR-2002; 2002US-0363364P.
XX
XX (BILLY & CO ELI.
XX
XX Gopalratnam G, Huang L, Riggin RM, Shetiga TA;
XX WPI; 2003-722308/68.
XX
XX
XX The invention comprises a pharmaceutical composition containing activated
CC protein C (apc), a chelating agent and optionally a diluent. The
CC composition of the invention is useful for treating thrombotic disorders,
CC such as: intravascular coagulation, thrombotic stroke, deep vein
CC thrombosis, pulmonary embolism, peripheral arterial thrombosis, acute
CC myocardial infarction and retina thrombosis. The present amino acid
CC sequence represents a human protein that was used in the exemplification
CC of the invention.
XX
SQ Sequence 419 AA;
Query Match 100.0%; Score 2324; DB 7; Length 419;
Best Local Similarity 100.0%; Pred. No. 3e-143;
Matches 419; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
QY 1 ANSPLEELHSSLSERECIEBEICDFEAKETIFQVNDTLAFMSKHVGDQCLVPLEHPCA 60
DB 1 ANSPLEELHSSLSERECIEBEICDFEAKETIFQVNDTLAFMSKHVGDQCLVPLEHPCA 60
QY 61 SLCCGHTCIDIGISFSDCCRSQWEGFPCQREVSFLNCSLDNGGCTHYCLEBVGWRRCSC 120
DB 61 SLCCGHTCIDIGISFSDCCRSQWEGFPCQREVSFLNCSLDNGGCTHYCLEBVGWRRCSC 120
QY 121 APGYKLGDDLQCHPAVYKPCGRPMKMEKRSKSHKRDTEQDQVDPRLIDGKTRRGD 180
DB 121 APGYKLGDDLQCHPAVYKPCGRPMKMEKRSKSHKRDTEQDQVDPRLIDGKTRRGD 180
QY 181 SPQVVLDSKKKLAAGAVALIHPSWVLTAAHOMESKKLAVRLGEYDLRRWEKXELDDI 240
DB 181 SPQVVLDSKKKLAAGAVALIHPSWVLTAAHOMESKKLAVRLGEYDLRRWEKXELDDI 240
QY 241 KEVFAHNYSKSTTNDIALHLAOPATLSQTTIVICLPDSGLAEELNQAQETLVGW 300
DB 241 KEVFAHNYSKSTTNDIALHLAOPATLSQTTIVICLPDSGLAEELNQAQETLVGW 300
QY 301 GYHSREKEAKNRRTFVNLFIKIPVPHNECSFVSNVSNMLCAGILGRQACBGDS 360
DB 301 GYHSREKEAKNRRTFVNLFIKIPVPHNECSFVSNVSNMLCAGILGRQACBGDS 360
QY 361 GGPWVASFHGTWFLVGLVSWGEGGGLHNYGYTVKSRVLDMLHGHIRDEKAPQKSNAP 419
DB 361 GGPWVASFHGTWFLVGLVSWGEGGGLHNYGYTVKSRVLDMLHGHIRDEKAPQKSNAP 419

DE Human Protein C zymogen protein.
 XX Human; Protein C; N-glycosylation; APC; activated protein C; zymogen;
 KW serum half-life; chromosome 2q13-q14; stroke; myocardial infarction;
 KW after venous thrombosis; disseminated intravascular coagulation; DIC;
 KW sepsis; septic shock; embolism; pulmonary embolism; burn; pregnancy;
 KW bone marrow transplantation; major surgery; trauma; ARDS; coagulant;
 KW adult respiratory distress syndrome; alpha-1 antitrypsin.
 XX
 OS Homo sapiens.
 XX
 FH Key Location/Qualifiers
 FT Protein 1..155
 FT Peptide /label= Light_chain
 FT Peptide 156..157
 FT Protein /label= Lys_Arg_dipeptide
 FT Protein 158..419
 FT Peptide /label= Heavy_chain
 FT Peptide 158..169
 FT Peptide /label= Activation_peptide
 XX
 EN MO200232461-A2.
 XX
 PD 25-APR-2002.
 XX
 PF 15-OCT-2001; 2001MO-DK000679.
 XX
 PR 18-OCT-2000; 2000DK-00001560.
 PR 18-OCT-2000; 2000US-0242268P.
 PR 21-JUN-2001; 2001DK-00000970.
 PR 21-JUN-2001; 2001US-0300154P.
 XX
 PA (MAXY-) MAXYGEN APS.
 PA (MAXY-) MAXYGEN HOLDINGS LTD.
 XX
 PI Andersen KV, Pedersen AH, Freshgaard PO;
 XX WPI; 2002-489875/52.
 DR N-PSDB; ABR6039.
 XX
 PT Novel conjugate useful for treating or preventing septic shock, stroke
 PT and myocardial infarction, comprises non-polypeptide group covalently
 PT attached to protein C polypeptide comprising an attachment group.
 XX
 PS Claim 2; Page 79-81; 92pp; English.
 XX
 CC The invention relates to a conjugate (I) comprising at least one non-
 CC polypeptide moiety (II) (e.g. an N-glycosyl group) covalently attached to
 CC a protein C polypeptide comprising an amino acid sequence which differs
 CC from that of a parent protein C polypeptide (III) in at least one
 CC introduced and/or at least one removed amino acid residue comprising an
 CC attachment group for the non-polypeptide group (e.g. an N-glycosylation
 CC site). Also included are (1) a variant (IV) of (III) comprising a
 CC substitution in a position (P) where (P) is an amino acid with at least
 CC 25% of its side group exposed to the surface, with the proviso that the
 CC substitution is not Thr245Ser/Ala/His/Lys/Arg/Asn/Asp/Glu/Gly/Gln.
 CC Tyr32Ser/Ala/Thr/His/Lys/Arg/Asn/Asp/Glu/Gly/Gln or Phe316Ser/Ala/Thr/
 CC His/Lys/Arg/Asn/Asp/Glu/Gly/Gln; (2) a nucleotide sequence (V) encoding
 CC (IV); (3) an expression vector (VI) comprising (V); (4) a host cell (VII)
 CC comprising (V) or (VI); (5) increasing (W2) the functional in vivo half-
 CC life or the serum half-life of a parent protein C polypeptide. The
 CC conjugates, variants and protein C proteins are useful as medicaments,
 CC and in the manufacture of medicaments for the treatment (and
 CC diagnosis/prevention) of stroke, myocardial infarction, after venous
 CC thrombosis, disseminated intravascular coagulation (DIC), sepsis, septic
 CC shock, emboli e.g. pulmonary emboli, transplantation such as bone marrow
 CC transplantation, burns, pregnancy, major surgery/trauma or adult
 CC respiratory distress syndrome (ARDS). The variant protein C has an
 CC increased resistance to activation by e.g. human plasma and alpha-1
 CC antitrypsin. The conjugates have an increased in vivo half-life,
 CC increased serum half-life, increased resistance to inhibitors, reduced
 CC renal clearance, reduced immunogenicity and/or increased bioavailability.
 CC The conjugate offers a number of advantages over the currently available

CC APC products, including longer duration between injections,
 CC administration of less protein, and fewer side effects. Moreover, a
 CC reduced anticoagulant activity is beneficial to reduce the risk of
 CC bleeding while maintaining the antiinflammatory activity of APC
 CC (activated protein C) conjugates. This must be especially important when
 CC the conjugate has an extended plasma life. The gene for protein C is
 CC located on chromosome 2q13-q14. The present sequence represents zymogen
 CC protein C upon which the variants of the invention were based
 XX
 SQ Sequence 419 AA;
 XX
 Query Match 100.0%; Score 2324; DB 5; Length 419;
 Best Local Similarity 100.0%; Pred. No. 3e-143;
 Matches 419; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
 QY 1 ANSPLELRHSERCTEIEICDFEAKETFCNVDDTLAFMSKRVGDQCLVPLEHCA 60
 DB 1 ANSPLELRHSERCTEIEICDFEAKETFCNVDDTLAFMSKRVGDQCLVPLEHCA 60
 QY 61 SLCCGHTCIDIGSPSCDPSGWEGRFCQREVSFLNCSLDNGCTHYCLEEVMRRCSG 120
 DB 61 SLCCGHTCIDIGSPSCDPSGWEGRFCQREVSFLNCSLDNGCTHYCLEEVMRRCSG 120
 QY 121 ARGYLGDLDLQCPAYKPCGRPMKMKKSHLKRTEQDQVDPRLIGKMTRRGD 180
 DB 121 ARGYLGDLDLQCPAYKPCGRPMKMKKSHLKRTEQDQVDPRLIGKMTRRGD 180
 QY 181 SPWQVLLDSKKLLAGAVLHPSNVLTAAHGMDSKLLVRLGEYDLRWEKELDLDI 240
 DB 181 SPWQVLLDSKKLLAGAVLHPSNVLTAAHGMDSKLLVRLGEYDLRWEKELDLDI 240
 QY 241 KEVFNENYKSTTNDIALHLAOPATLSQTVPICLPDSGLARELNDAQOFTLVTTGW 300
 DB 241 KEVFNENYKSTTNDIALHLAOPATLSQTVPICLPDSGLARELNDAQOFTLVTTGW 300
 QY 301 GYHSSREKAKRRTVNLFTIKPVEHNECSFVSNVSNMCAGLIGDQACEDGS 360
 DB 301 GYHSSREKAKRRTVNLFTIKPVEHNECSFVSNVSNMCAGLIGDQACEDGS 360
 QY 361 GGPVVASPHGTWFLVGLVSWBGGLAHNYGVYTKVSRYLDMIGHIRDEKAPQKSNAP 419
 DB 361 GGPVVASPHGTWFLVGLVSWBGGLAHNYGVYTKVSRYLDMIGHIRDEKAPQKSNAP 419
 RSBLUT 5
 ABR55547
 ID ABR55547 standard; protein; 419 AA.
 XX
 AC ABR55547;
 XX
 DT 11-AUG-2003 (first entry)
 XX
 DE Amino acid sequence of mature human protein C (PC).
 XX
 KW Protein C; coagulation; thrombin; fibrinopeptide A; serine protease;
 KW antithrombotic; antiinflammatory; antiapoptotic; profibrinolytic;
 KW hypercoagulative disease; thrombosis; myocardial infarction;
 KW pulmonary embolism; reocclusion; angioplasty; thrombomodulin.
 XX
 OS Homo sapiens.
 XX
 FH Key Location/Qualifiers
 FT Region 1..157
 FT Active-site /note= "light chain"
 FT Region 158..169
 FT Region 170..419
 FT /note= "heavy chain"
 XX
 PN FR2831170-A1.
 XX
 PD 25-APR-2003.
 XX
 PF 19-OCT-2001; 2001FR-00013492.

CC and stroke. Protein C derivatives with amino acid substitutions result in
 CC increased resistance to inactivation by seipins when compared to wild-
 CC type activated human protein C. They also have longer half-lives in human
 CC blood and hence require either less frequent administration and/or
 CC smaller dosage than wild type human protein C for treating disorders
 XX
 SQ Sequence 419 AA;

Query Match 100.0%; Score 2324; DB 4; Length 419;
 Best Local Similarity 100.0%; Pred. No. 3e-143;
 Matches 419; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 ANSFLELRHSSLERECIEETCDPEAKELFQNVDDTLAFWSKYVNDGQCVLPLEHPCA 60
 DB 1 ANSFLELRHSSLERECIEETCDPEAKELFQNVDDTLAFWSKYVNDGQCVLPLEHPCA 60
 QY 61 SLCCGHGTCIDIGSFSCDCRSQMEGRFCQREVSFLNCSLDNGGCTHYCLEEVGMRRCSC 120
 DB 61 SLCCGHGTCIDIGSFSCDCRSQMEGRFCQREVSFLNCSLDNGGCTHYCLEEVGMRRCSC 120
 QY 121 APGYKGGDILLQCHPAVYPCGRPMKREKRSKSHLKDTEDQEDQVDPRLIDGKMTRRGD 180
 DB 121 APGYKGGDILLQCHPAVYPCGRPMKREKRSKSHLKDTEDQEDQVDPRLIDGKMTRRGD 180
 QY 241 KEVVFHNTSKSTTNDIALHLAQPATLSQTIIVPICLPDSGLAEELNQAQETLVYGM 300
 DB 241 KEVVFHNTSKSTTNDIALHLAQPATLSQTIIVPICLPDSGLAEELNQAQETLVYGM 300
 QY 301 GYHSREKAKRNRTFVNFITKIPVPHNECSVWNSVNNMLCAGILGDRQACEGDS 360
 DB 301 GYHSREKAKRNRTFVNFITKIPVPHNECSVWNSVNNMLCAGILGDRQACEGDS 360
 QY 361 GGPVWASFHGTWFLVGLVSWEGCGLLHNYGYTVKSYRLDMHGHIRDEKAPQKSWAP 419
 DB 361 GGPVWASFHGTWFLVGLVSWEGCGLLHNYGYTVKSYRLDMHGHIRDEKAPQKSWAP 419

RESULT 3
 AA08625
 ID AA08625 standard; protein; 419 AA.

DT 01-NOV-2001 (first entry)
 XX
 DB Human mature wild type protein C.

XX Human; protein C derivative; anticoagulation activity; thrombosis;
 KW serpin inactivation; acute coronary syndrome; myocardial infarction;
 KW vascular occlusive disorder; hypercoagulable state; angina; sepsis;
 KW disseminated intravascular coagulation; DIC; burn; transplantation;
 KW sickle cell disease; viral haemorrhagic fever; protein C deficiency;
 KW haemolytic uremic syndrome; acute arterial thrombotic occlusion;
 KW thromboembolism; prothrombotic disorder; gene therapy; thalassemia.

XX Homo sapiens.
 OS
 XX MO200159084-A1.

PD 16-AUG-2001.

PF 02-FEB-2001; 2001WO-US001221.

PR 11-FEB-2000; 2000US-018-948P.

PR 14-MAR-2000; 2000US-0189199P.

XX (EHL) LILLY & CO ELI.

XX Gerlitz BE, Grinnell EW, Jones BE,

XX WPI; 2001-514662/56.
 DR N-PSDB; AAD15223.
 XX
 PT Protein C derivative for treating acute coronary syndromes, vascular
 PT occlusive disorders, thrombotic disorders and sepsis, comprises
 PT substitutions at specified amino acid positions.

Claim 1; Page 43-44; 59pp; English.

The invention relates to human protein C derivatives and nucleic acid
 CC molecules encoding such derivatives. These derivatives have increased
 CC anticoagulation activity, resistance to seipin inactivation and increased
 CC sensitivity to thrombin activation compared to wild type protein C, and
 CC retains the biological activity of the wild type human protein C. Protein
 CC C derivatives are useful in the manufacture of a medicament for the
 CC treatment of acute coronary syndromes e.g. myocardial infarction and
 CC unstable angina; and disease states predisposing to thrombosis; vascular
 CC occlusive disorders and hypercoagulable states e.g. disseminated
 CC intravascular coagulation (DIC), burns, transplantations, thalassemia,
 CC sickle cell disease, viral haemorrhagic fever and haemolytic uremic
 CC syndrome; sepsis in combination with bacterial permeability increasing
 CC protein; thrombotic disorders in combination with an anti-platelet agent;
 CC protein C deficiency; acute arterial thrombotic occlusion
 CC thromboembolism or stenosis in coronary, cerebral or peripheral arteries
 CC or in vascular grafts in combination with a thrombolytic agent. Nucleic
 CC acid molecules of the invention are useful for treating humans with
 CC genetically predisposed prothrombotic disorders by gene therapy. The
 CC present sequence is human mature wild type protein C

SQ Sequence 419 AA;

Query Match 100.0%; Score 2324; DB 4; Length 419;
 Best Local Similarity 100.0%; Pred. No. 3e-143;
 Matches 419; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 ANSFLELRHSSLERECIEETCDPEAKELFQNVDDTLAFWSKYVNDGQCVLPLEHPCA 60
 DB 1 ANSFLELRHSSLERECIEETCDPEAKELFQNVDDTLAFWSKYVNDGQCVLPLEHPCA 60
 QY 61 SLCCGHGTCIDIGSFSCDCRSQMEGRFCQREVSFLNCSLDNGGCTHYCLEEVGMRRCSC 120
 DB 61 SLCCGHGTCIDIGSFSCDCRSQMEGRFCQREVSFLNCSLDNGGCTHYCLEEVGMRRCSC 120
 QY 121 APGYKGGDILLQCHPAVYPCGRPMKREKRSKSHLKDTEDQEDQVDPRLIDGKMTRRGD 180
 DB 121 APGYKGGDILLQCHPAVYPCGRPMKREKRSKSHLKDTEDQEDQVDPRLIDGKMTRRGD 180
 QY 241 KEVVFHNTSKSTTNDIALHLAQPATLSQTIIVPICLPDSGLAEELNQAQETLVYGM 300
 DB 241 KEVVFHNTSKSTTNDIALHLAQPATLSQTIIVPICLPDSGLAEELNQAQETLVYGM 300
 QY 301 GYHSREKAKRNRTFVNFITKIPVPHNECSVWNSVNNMLCAGILGDRQACEGDS 360
 DB 301 GYHSREKAKRNRTFVNFITKIPVPHNECSVWNSVNNMLCAGILGDRQACEGDS 360
 QY 361 GGPVWASFHGTWFLVGLVSWEGCGLLHNYGYTVKSYRLDMHGHIRDEKAPQKSWAP 419
 DB 361 GGPVWASFHGTWFLVGLVSWEGCGLLHNYGYTVKSYRLDMHGHIRDEKAPQKSWAP 419

RESULT 4
 AAU99002
 ID AAU99002 standard; protein; 419 AA.

AC AAU99002;

DT 23-AUG-2002 (first entry)

FT /note="cleavage makes a 2-chain inactive precursor (155-
 FT amino acid light chain attached via a disulfide bond to a
 FT 262-amino acid heavy chain)"
 FT Peptide
 FT 158..169
 FT /note="activation peptide; removal activates the 2-chain
 FT zymogen"
 FT 169..170
 FT /note="thrombin cleavage site"
 FT Disulfide-bond 196..212
 FT Modified-site 248
 FT /note="N-glycosylated"
 FT 313
 FT /note="N-glycosylated"
 FT 329
 FT Modified-site /note="N-glycosylated"
 FT Disulfide-bond 331..345
 FT Disulfide-bond 356..364
 XX
 XX W0200157193-A2.
 XX
 XX 09-AUG-2001.
 XX 19-JUN-2001; 2001MO-US000020.
 XX
 XX 02-FEB-2000; 2000US-0179801P.
 XX 14-MAR-2000; 2000US-0189197P.
 XX
 XX (ELIL) LILLY & CO ELI.
 XX
 XX Gerlitz BE, Jones BE;
 XX WPI; 2001-496919/54.
 XX N-PSDB; AAB26361.
 XX
 PT Novel human protein C derivative for treating, e.g., myocardial
 PT infarction, unstable angina, sepsis, thrombotic disorders, acute arterial
 PT thrombotic occlusion, and thromboembolism.
 XX
 PS Claim 1; Page 49-50; 63pp; English.
 XX
 CC The present sequence is that of human protein C mature polypeptide. The
 CC invention relates to human protein C derivatives having at least 2 amino
 CC acid substitutions, and to recombinant DNA molecules encoding such
 CC derivatives. These derivatives have increased anticoagulant activity and
 CC resistance to inactivation by serpins compared with wild-type human
 CC protein C but retain the biological activity of the wild-type protein.
 CC The amino acid substitutions are selected from H10Q, S11G, S12K, Q32E,
 CC N33D, N33F, and amino acids at positions 194, 195, 228, 249, 254, 302, or
 CC 316 of the mature protein C polypeptide substituted with Ser, Ala, Thr,
 CC His, Lys, Leu, Arg, Asn, Asp, Glu, Gly or Gln. Preferred protein C
 CC derivatives are given in AAB2675-78. Also claimed are a vector
 CC comprising DNA encoding the novel human protein C derivatives,
 CC transformed host cells and a method of producing the human protein C
 CC derivatives. The protein C derivatives are useful for treating coronary
 CC syndromes and disease states predisposing to thrombosis (e.g. myocardial
 CC infarction and unstable angina), vascular occlusive disorders and
 CC hypercoagulable states, sepsis (in combination with bactericidal
 CC permeability increasing protein or with tissue factor pathway inhibitor),
 CC thrombotic disorders (in combination with an anti-platelet agent or by
 CC local delivery through an intracoronary catheter), protein C deficiency,
 CC acute arterial thrombotic occlusion, thromboembolism, or stenosis in
 CC coronary, cerebral or peripheral arteries or in vascular grafts. Human
 CC patients with genetically predisposed prothrombotic disorders may be
 CC treated by gene therapy (all claimed)
 XX
 XX Sequence 419 AA;
 XX
 XX Query Match 100.0%; Score 2324; DB 4; Length 419;
 XX Best Local Similarity 100.0%; Pred. No. 3e-143;
 XX Matches 419; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
 XX
 XX 1 ANSFLEHRSLSRECEIEICDFEAKEIFQVNDPTLAFWSKVDQCVLPLEHPCA 60
 XX |||||||||||||||||||||||||||||||||||||||||||||||||||||||
 XX |||||||||||||||||||||||||||||||||||||||||||||||||||||||

DB 1 ANSFLEHRSLSRECEIEICDFEAKEIFQVNDPTLAFWSKVDQCVLPLEHPCA 60
 QY 61 SLCCGHCCTDGGSSCCGSGWGRFCOREVSPFNGSLNGCTHYCLEEYGRRCSC 120
 DB 61 SLCCGHCCTDGGSSCCGSGWGRFCOREVSPFNGSLNGCTHYCLEEYGRRCSC 120
 QY 121 AGCYLGDLDLQCHPVPKPCGRPKMEKRSKHLKPTDEOENQVDPRLIDSKTRRGD 180
 DB 121 AGCYLGDLDLQCHPVPKPCGRPKMEKRSKHLKPTDEOENQVDPRLIDSKTRRGD 180
 QY 181 SPQVVLDSKPKKLAQAVLHPSPVLTAAHCDSESKLLVRLGEYDRWEKXELDDI 240
 DB 181 SPQVVLDSKPKKLAQAVLHPSPVLTAAHCDSESKLLVRLGEYDRWEKXELDDI 240
 QY 241 KEVFPHPYKSTTNDLALHLAQPATLSQTVPICLPDSGLARELNOAGETLVYTW 300
 DB 241 KEVFPHPYKSTTNDLALHLAQPATLSQTVPICLPDSGLARELNOAGETLVYTW 300
 QY 301 GYHSREKEAKRRTVYLFKIPVPHNECSFVSNVSNMCAGLIGRDQACEDS 360
 DB 301 GYHSREKEAKRRTVYLFKIPVPHNECSFVSNVSNMCAGLIGRDQACEDS 360
 QY 361 GGPVYASPHGTWFLVGLVSWEGGCLHNYGYTVKVSRYLDMIGHIRDPKAPQKSNAP 419
 DB 361 GGPVYASPHGTWFLVGLVSWEGGCLHNYGYTVKVSRYLDMIGHIRDPKAPQKSNAP 419

RESULT 2
 AAB36894
 ID AAB36894 standard; protein; 419 AA.
 XX
 XX AAB36894;
 AC 26-FEB-2001 (first entry)
 XX
 XX Human protein C derivative 1.
 XX
 XX Protein C; human; vascular occlusive; burn; transplantation;
 XX deep vein thrombosis; sickle cell; thalassemia; thrombotic disorders;
 XX myocardial infarction; angina; stroke.
 XX
 XX Homo sapiens.
 XX
 XX W020006754-A1.
 XX
 XX 09-NOV-2000.
 PD
 XX 13-APR-2000; 2000MO-US008722.
 PR 30-APR-1999; 99US-0131801P.
 XX
 XX (ELIL) LILLY & CO ELI.
 XX
 XX Gerlitz BE, Jones BE;
 XX WPI; 2001-007227/01.
 XX N-PSDB; AAC8311.
 DR
 XX Protein C derivatives, useful for treating vascular occlusive disorder,
 PT hypercoagulable state, thrombotic disorder and disease states
 PT predisposing thrombosis, comprises specific amino acid substitutions.
 XX
 XX Claim 1; Page 42-44; 57pp; English.
 XX
 CC The present invention relates to a human protein C derivative. The
 CC protein is useful for treating vascular occlusive disorders,
 CC hypercoagulable states such as sepsis, disseminated intravascular
 CC coagulation, purpura fulminans, major trauma, major surgery, burns, adult
 CC respiratory distress syndrome, transplantation, deep vein thrombosis,
 CC heparin-induced thrombocytopenia, sickle cell disease, thalassemia, viral
 CC hemorrhagic fever, thrombotic thrombocytopenic purpura, and hemolytic
 CC uremic syndrome, and also useful for treating thrombotic disorders and
 CC acute coronary syndromes such as myocardial infarction, unstable angina,

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OM protein - protein search, using sw model

Run on: June 2, 2004, 16:47:42 ; Search time 60 Seconds

(without alignments)
1973.123 Million cell updates/sec

Title: US-09-997-623-4

Perfect score: 2324
Sequence: 1 AANSFELRHSLSRECFE.....LDWHGHTRDPAQKSWAP 419Scoring table: BLOSUM62
Gapop 10.0 , Gapext 0.5

Searched: 1586107 seqs, 282547505 residues

Total number of hits satisfying chosen parameters: 1586107

Minimum DB seq length: 0

Maximum DB seq length: 200000000

Post-processing: Minimum Match 0%

Maximum Match 100%
Listing first 45 summaries

Database :

1: A_Geneseq_29Jan04:*
2: geneeqp1980s:*
3: geneeqp1990s:*
4: geneeqp2000s:*
5: geneeqp2001s:*
6: geneeqp2002s:*
7: geneeqp2003as:*
8: geneeqp2004s:*

Pred. No. is the number of results predicted by chance to have a
score greater than or equal to the score of the result being printed,
and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Query Match	Length	ID	Description
1	2324	100.0	419	4 AAB82673	AAB82673 Wild-type
2	2324	100.0	419	4 AAB86894	AAB86894 Human pro
3	2324	100.0	419	4 AAB86825	AAB86825 Human mat
4	2324	100.0	419	5 AAU99002	AAU99002 Human pro
5	2324	100.0	419	6 ABR55547	ABR55547 Amino act
6	2324	100.0	419	7 ADC40014	ADC40014 Human act
7	2324	100.0	460	1 AAB81104	AAB81104 Sequence
8	2324	100.0	461	1 AAB60001	AAB60001 Sequence
9	2324	100.0	461	1 AAB70855	AAB70855 Human pro
10	2324	100.0	461	1 AAB90401	AAB90401 Zymogen F
11	2324	100.0	461	2 AAR13622	AAR13622 Human pro
12	2324	100.0	461	2 AAR13081	AAR13081 Human pro
13	2324	100.0	461	2 AAR13074	AAR13074 Protein C
14	2324	100.0	461	2 AAR14295	AAR14295 Protein C
15	2324	100.0	461	2 AAW02600	AAW02600 Human pro
16	2324	100.0	461	2 AAY49561	AAY49561 Human lec
17	2324	100.0	461	4 AAB82674	AAB82674 Wild-type
18	2324	100.0	461	4 AAB86895	AAB86895 Human pro
19	2324	100.0	461	4 AAB86826	AAB86826 Human wtl
20	2324	100.0	461	5 AAU99001	AAU99001 Human pro
21	2321	99.9	419	5 AAU99035	AAU99035 Human pro
22	2321	99.9	419	5 AAU99031	AAU99031 Human pro
23	2321	99.9	461	1 AAB81205	AAB81205 Human pro
24	2321	99.9	461	1 AAB90070	AAB90070 Human pro
25	2320	99.8	419	5 AAU99074	AAU99074 Human pro

26	2319	99.8	419	5 AAU99033	AAU99033 Human pro
27	2319	99.8	419	5 AAU99015	AAU99015 Human pro
28	2319	99.8	461	2 AAR13539	AAR13539 Human pro
29	2318	99.7	419	4 AAB86896	AAB86896 Human pro
30	2318	99.7	419	5 AAU99073	AAU99073 Human pro
31	2318	99.7	419	5 AAU99096	AAU99096 Human pro
32	2318	99.7	419	5 AAU99032	AAU99032 Human pro
33	2318	99.7	461	2 AAR13997	AAR13997 Human pro
34	2318	99.7	461	2 AAR13582	AAR13582 Human pro
35	2318	99.7	461	2 AAR13585	AAR13585 Human pro
36	2318	99.7	461	2 AAR13584	AAR13584 Human pro
37	2317	99.7	419	5 AAR35760	AAR35760 Protein C
38	2317	99.7	419	5 AAU99047	AAU99047 Human pro
39	2317	99.7	419	5 AAU99069	AAU99069 Human pro
40	2317	99.7	419	5 AAU99036	AAU99036 Human pro
41	2317	99.7	419	5 AAU99075	AAU99075 Human pro
42	2317	99.7	419	5 AAU99043	AAU99043 Human pro
43	2317	99.7	460	2 AAW25086	AAW25086 Human pro
44	2316	99.7	419	5 AAU99013	AAU99013 Human pro
45	2316	99.7	419	5 AAU99019	AAU99019 Human pro

ALIGNMENTS

RESULT 1

ID AAB82673 standard; protein; 419 AA.

XX AAB82673;

DT 15-OCT-2001 (first entry)

DE Wild-type human protein C.

XX
KW Protein C; human; coronary syndrome; thrombosis; angina;
KW myocardial infarction; vascular occlusive disorder; hypercoagulation;
KW sepsis; protein C deficiency; occlusion; thromboembolism; stenosis;
KW antibacterial; immunosuppressive; thrombolytic; cardiact; antiangiinal;
KW anticoagulant; therapy.

XX Homo sapiens.

OS Location/Qualifiers

FH Domain

FT /note= "Gla domain"

FT Modified-site

FT /note= "gamma-carboxylated"

FT Modified-site

FT /note= "gamma-carboxylated"

FT Modified-site

FT /note= "gamma-carboxylated"

FT Modified-site

FT /note= "gamma-carboxylated"

FT Modified-site

FT /note= "N-glycosylated"

FT Disulfide-bond 50..69

FT Disulfide-bond 59..64

FT Disulfide-bond 80..89

FT Disulfide-bond 98..109

FT Disulfide-bond 120..133

FT Disulfide-bond 141..177

FT Cleavage-site 156..157

US 102764430IP1



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Total number of pages: 7

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